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ADDRESSES.

STATE REGULATION OF MEDICAL PRACTICE.

The Retiring President's Address, delivered at the Tenth Annual Meeting of the Detroit Medical and Library Association, Oct. 4, 1886,

BY C. J. LUNDY, A.M., M.D.

Ladies and Gentlemen, Members of the Detroit Medical and Library Association:

We are assembled this evening to celebrate our society's tenth anniversary, and, I trust, the year about to close has been one of pleasure and profit to us all. When one year ago you conferred upon me the honor of the presidency of this society, I accepted the office with doubt and misgivings. The year preceding my installment in office had been one of unusual activity and prosperity. Such prosperity has seldom been enjoyed by a local society, especially outside the large cities of the East. Numerous valuable papers had been presented; interesting discussions, upon given topics, had been held, and a large amount of pathological material had been exhibited during the year. The membership of the society had greatly increased and the regular attendance had been unusually large during the incumbency of my predecessor. No wonder, then, that I should have entertained fears lest the year during which I was to preside over your deliberations might witness a diminution in the interest and good work of the society. Still, I was in no small degree encouraged by the fact that we had an indefatigable secretary, to whom this society owes so much, and also by the fact that we have a large number of members interested in society work—members who had large resources from which to draw—and I think you will agree with me when I say they have drawn upon these resources most generously, and they have made this another prosperous year for this society. Such work as you have done during the past year could not fail to prove interesting, profitable and instructive, and it is somewhat surprising that so many busy practitioners have found it possible to devote so much time to society work.

According to the secretary's report, I find that there were read during the year twenty-three papers on numerous and interesting topics. There were held five discussions upon various subjects, mostly chosen by the advisory council. More than seventy pathological specimens and microscopic mountings were presented. A large number of patients was exhibited, either to illustrate some interesting disease, or to show the results of some important surgical operation. Indeed, the number and character of the pathological specimens alone would have done credit to a pathological society. I doubt if any local society in the country has done more profitable, interesting and instructive work during the year than has the Detroit Medical and Library Association.

In addition to the many valuable papers presented by our resident members, we have had the pleasure of listening to able papers from several gentlemen residing outside the city. Among others were one by Dr. T. K. Holmes, President of the Canadian Medical Association; one by Prof. V. C. Vaughan, of the State University; one by Dr. Henry M. Hurd, Superintendent of the Eastern Michigan Asylum; one by Dr. George Tye, President of the Ontario Medical Society; and one by Dr. E. P. Christian, President of the State Medical Society. While the inviting of eminent men outside the city to read papers before us is not exactly a new departure, yet it has been done to a much greater extent this year than heretofore. In my opinion it is a good course to pursue, and I am sure all will admit that we were both entertained and instructed by the able papers presented by the gentlemen named. We have also been delighted and encouraged by the frequent presence of gentlemen, prominent in the profession, who are not members of this society. Many of these are either officers of, or prominently connected with, sister societies, and their presence at our meetings has always been a source of great pleasure to me.

Our society has increased its membership by the election of thirty new members. Of these nineteen were elected as active members, ten as corresponding members, and one was elected as an honorary member. We have now a total membership of 136. It is possible that some may contend that a society with a large membership may prove unwieldy, but I certainly do not entertain such views. Instead of having a few members present, we have had an average attendance of thirty one. On several occasions the attendance has been between forty and fifty. When so many gentlemen interest themselves in society work, it may be relied upon that the meetings will be of interest and profit to all concerned. I have attended most of the meetings during the year, and I have no hesitation in saying that I always went away feeling I had been instructed by the papers,

discussions and reports of cases. I doubt if this unflagging interest could have been kept up throughout the year were our society a small one.

Now, while our society has done much good work during the year, and while we have had interesting discussions, interesting reports of cases, interesting pathological specimens, and interesting and valuable papers, yet I think our society might do other valuable work, and might wield its influence to remedy an evil which has grown to great proportions, and which has done great harm in our commonwealth. It is an unfortunate fact, but fact it is, nevertheless, that in Michigan the ratio of quack doctors to the population is greater than in almost any other State. It is a well-known fact that in other States Michigan is regarded as the asylum of quacks. It is a well-known fact that when a law is about to be enacted against quackery in other States, the charlatans of those States turn their eyes towards Michigan as a land flowing with milk and honey—a land in which they will find protection, and where they may pursue their nefarious business without let or hindrance. In our State any man, no matter how ignorant, no matter how illiterate, no matter how unskillful he may be, any man, I say, may undertake without let or hindrance to cure all ills to which human flesh is heir; may undertake to treat any disease or to correct any deformity of the human form divine.

In this great State of Michigan, in which we have such a grand system of public instruction, such fine educational institutions, such fine facilities for obtaining an education, whether lay or professional, it is a disgrace to see men and women, without any preparation, or training, or qualification whatever, setting themselves up as physicians, and through false pretense swindling our citizens out of enormous amounts of money. It is generally well known that the charlatans of this State rob and beguile the unwary with a merciless hand, and that the amount of money which is annually filched from our people by these swindlers is very large. But I am satisfied that few even of you, ladies and gentlemen, could form an approximate estimate of the amount of money which is taken yearly by the wily and unscrupulous charlatans of this State. In my presidential address before the medical alumni of the State University (extracts from which I have embodied in this paper) I took occasion to refer to the "Medical Practice Act" of Illinois, and upon that subject I made the following quotation from the writings of ex-Governor John M. Hamilton:

"The Medical Practice Act was primarily a police regulation. Incidentally it was educational. Primarily the purpose of the law was to rid the State of incompetent, ignorant and dangerous mountebanks and quacks, who were carrying on a fraudulent and nefarious business by all manner of deceit in a pretended practice of medicine among the people. It was to protect the lives, the health, the morals and the property of the people of the State from the shameless depredations of swindlers and adventurers who, by all manner of false representations and deceptive promises, were taking advantage of the misfortunes of the people in sickness and ailments of all kinds, to still further injure their health, endanger their lives and rob them of their money."

To me it is incomprehensible that in Michigan all attempts to regulate the practice of medicine, to suppress quackery and to protect the people from the depredations to which Gov. Hamilton has so forcibly referred, have been practically unavailing. We boast of the intelligence of our people and of our educational facilities, and it would seem that there is some foundation upon which to base these claims. But if we are to judge of the intelligence of a people by the laws which they enact for the protection of their rights, their property, their health, their morals and their happiness, we must admit that the people of this commonwealth lack the intelligence to grapple with one of the most important questions of our time. In every State there is a law against obtaining either goods or money by false representation. Indeed, it was only a few days since that a culprit was brought to justice in one of the towns of this State because he represented the circulation of a small paper to be much larger than it was in reality. However, a man may pretend he is a physician, and in this guise he may swindle and rob the people of this State with impunity, and there is no law to prevent him. If, as Gov. Hamilton has said, the people of Illinois found it necessary to enact a law "to protect the lives, the health, the morals and the property of the people of that State from the shameless depredations of swindlers and adventurers who, by all manner of false representations and deceptive promises, were taking advantage of the misfortunes of the people in sickness and ailments of all kinds, to still further injure their health, endanger their lives and rob them of their money," why should not Michigan, with her boasted intelligence, be ready and willing to afford her citizens similar protection and enact similar laws? Laws to suppress quackery have been enacted in other States, and we see that the people of Iowa, of Wisconsin, of California, of Mississippi, of Alabama, of North Carolina, of Virginia, of New York, and of other States, have cried out against quacks and charlatans, and the law-makers of these States have had the intelligence to give the citizens of their respective States that protection to which all civilized communities are entitled. Can it be possible that our boasted intelligence is only a myth, and that after all the citizens of Michigan are intellectually inferior to the people of other States? If it is the will of the people that we should, in the space of three years, pay out to swindling mountebanks and quacks as much money as would pay for all the school houses and school property in this great State of Michigan, then must we answer the question in the affirmative. But I, for one, do not believe it is the "people's will" that this condition of affairs should exist within the borders of our fair State. I believe the fault lies elsewhere. I believe that if this monster were shown to the people in a proper light they would rise up as one man and crush it. Can the fault be charged to our legislators? Can it be possible that the men who represent us in the legislature of this State are not a fair criterion by which one can judge of the intelligence of our people? Or can it be possible

that the majority of these legislators have venal motives in casting their votes when the interests of the people are at stake? And can it be possible that the chief of a corporation of quacks spoke truly when he said he had "fixed the legislature and defeated the medical bill, but that it took money to do it?"

Let the fault lie where it may, one thing is certain, and that is, the State of Michigan has thus far utterly failed to grant to her citizens that protection from swindling mountebanks and quacks which she is in duty bound to afford them. Michigan should learn wisdom from other States; and her legislators should show that degree of intelligence which was shown by the legislators of Illinois, when they passed the "Medical Practice Act" nine years ago. It is true, a pretence for a bill against quackery became a law at the last meeting of the legislature. This law is an utter failure, and for the following reasons: First, it did not contemplate the prevention of quackery within the State, because it was not intended that it should interfere with the nefarious business of the quacks already here. Second, because all manner of men have been allowed to register under the law. We find that not only druggists and others who had not been heretofore engaged in practice, but still others, who thought they might desire to practice medicine at some time in the future, have enrolled themselves, and in the eyes of our farcical law they are your equals. Third, the law is a failure because it has not been enforced, except in a single instance. To-day the people of Michigan are as fully at the mercy of the relentless charlatan as they were a quarter of a century ago.

The passage of the "Medical Practice Act" in Illinois forced about three thousand charlatans to quit their nefarious business or leave the State. After nine years' experience with this great and good law, we see that there are nine hundred fewer physicians in the State of Illinois than there were when the law was enacted nine years ago, while the population of the State has increased nearly one million within that time. To reduce the matter to a mathematical calculation, let us suppose that the average amount of money which each of these swindling quacks succeeded in filching from his dupes was $2,500 per annum. By many this will be considered too small an estimate, for many of them spent money lavishly in advertising their business. Now, multiply the $2,500—the sum which each obtained—by 3,000—the number of quacks forced to leave the State—and we get the sum of $7,500,000 which has been saved in one year. Let us again multiply this by nine—the number of years the law has been in operation—and we find that $67,500,000 have been saved the people of Illinois by the passage of this law regulating medical practice within the State.

Let us apply this mathematical calculation to our State. The population of Michigan is equal to one-half that of Illinois. Upon that basis we have 1,500 quacks in this State. Indeed, it is probable that the number is considerably greater. There are at least 1,500 men and women in Michigan who pretend to be physicians, but who have no qualifications for the profession which they pretend to practice. Upon the same basis of calculation which applied to Illinois, the people of this State have been robbed of more than $37,000,000 within ten years, or $3,750,000 annually.

Thirty-seven and a half million dollars, the amount of money of which we have been robbed in ten years, is three times greater than the entire cost of all the school houses, high schools, academies and colleges of this State, even including our State University. Thirty-seven and a half millions of money is equal to four times the cost of erecting all of the penal, pauper and charitable institutions of Michigan, even including the three asylums for the insane. Thirty-seven and a half million dollars would cover the cost of erecting all the church edifices in the State. One-third the money which is annually paid to the quacks would build and equip all the hospitals in the State, and one-tenth of that amount would cover the cost of maintaining these hospitals. One-fifth of the money annually filched from our people by these charlatans would maintain a large free hospital in every town in the State having a population of 5,000 or over. The money of which the citizens of Michigan are annually despoiled by these wily quacks would pay the yearly salary of all the teachers and professors in our public schools, normal school, agricultural college and our State University. One-half the money of which the people are yearly robbed, because our legislators have failed to give them protection from a horde of swindling mountebanks, would more than pay the salaries of all the clergymen in the State.

I have said that few even of you had formed a correct estimate of the appalling condition of affairs which exists in this State. To me the study of the question has been a series of surprises, and in more than one instance have I doubted my own figures. I am quite certain that few, or none of the laity have any correct idea of the extent to which a sort of licensed robbery is carried on in this fair State of Michigan.

Now comes the question of prevention. Many physicians will say, it is none of our business; if the people are willing to be swindled by these fellows, it matters not to us; if the people will not avoid these mountebanks, let the people suffer for it; if the people cannot choose between properly educated physicians and those who are mere pretenders, they should bear the consequences; if the people will not learn to avoid the charlatans who put forth glittering advertisements, and who try to dupe them by all manner of false promises, they, the people, should pay the penalty. I well remember hearing one physician say: "So and-so's advertisement sends me many patients who would not think of consulting a doctor had not the advertisement frightened them." All these things indicate a niggardly, uncharitable, unphilanthropic spirit, and they show such physicians to be unworthy their noble calling.

The business of most physicians is unaffected by the presence of the charlatan, because the victims of the latter are largely those upon whose imagination and credulity he can play. One of the princes of this class of swindlers held forth in this city not long

since, and he admitted to an acquaintance of mine that he "did not pretend to cure people," he "preferred to humbug them, as it paid best." This wily quack must have robbed the people of Detroit and vicinity of several thousand dollars in a few weeks.

In every town in this State you will find physicians coöperating with the State Board of Health to enlighten the people, and trying to protect them from influences which tend to produce sickness and death. And to the honor of these noble men and true physicians, these true friends of humanity, who compose our State Board of Health, be it said, they have done much to enlighten the people, to warn them of the dangers which surround them, and to instruct them as to the best means of guarding against many of the preventable diseases. So, also, our Board of Health has done an invaluable service to our city, not the least of which has been the instruction of our citizens regarding the importance of sanitary measures, and the best means of limiting the spread of contagious diseases.

Who will say, then, that the medical profession, as a whole, not only those of the regular school, but also the homœopathic brethren, should not unite as one body of teachers, to instruct the people of this State regarding the importance of a law which, in the words of Gov. Hamilton, "will protect the lives, the health, the morals and the property of the people of the State." I maintain it is the duty of the medical profession to point out to the people the dangers which surround them. I maintain it is the bounden duty of every true physician to use the power that in him lies, to alleviate the sufferings and right the wrongs, protect the lives, the health, the morals and the property of his fellow beings, and to warn the community in time of danger. I believe that this, the largest local society in the State, could render valuable assistance in bringing about a much needed reform in medical practice in Michigan. If the Detroit Medical and Library Association would take the first step in enlightening the public, I think other medical societies would follow their example.

We should have a law prohibiting all non-graduates of respectable colleges from practicing medicine until they had passed a satisfactory examination before a State board of examiners, similarly constituted to the State board of examiners in pharmacy. After the enactment of such a law, no man, whether a graduate in medicine or not, should be allowed to commence the practice of medicine in the State until he had passed a satisfactory examination before the State board of examiners. Such a law is in force in Virginia, Mississippi, and other States, and it works well. Such a law tends to make medical colleges more careful in regard to graduating incompetent men. For my part, I would like to see a law in Michigan which would compel all candidates for a medical degree to go before a State board of examiners, which board should be entirely independent of the medical colleges in the State.

It may be difficult, it may even be impossible, for us to enact in this State a law which will afford the people all the protection to which they are entitled, but if we can arouse public sentiment upon this question, much can be accomplished. The public press is the great moulder of public opinion, and if we can call this powerful engine to our aid, we can accomplish what we desire. As an evidence of the influence of the press we are reminded that one of the newspapers of this city actually drove out of existence the "Skuce Thomas" bogus medical college and diploma mill which began its nefarious business here a few years ago. If the public press of this city and State will come to our aid, we can have enacted in Michigan a law which will rid her of her mountebanks and quacks, a law which, in the words of Gov. Hamilton, will "protect the lives, the health, the morals and the property of the people of the State from the shameless depredations of these swindlers and adventurers."

ORIGINAL ARTICLES.

A CASE OF CHRONIC PSEUDO-MEMBRANOUS BRONCHITIS.[1]

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Pseudo-membranous bronchitis is rarely met with. In making this statement I exclude the persistence of a diphtheritic bronchitis and croupous pneumonia, in both of which diseases the expulsion of false membranes may occur. It is, perhaps, not always easy to make an absolutely correct differential diagnosis of these cases. This difficulty rests upon the fact that (1) membranous inflammation of the bronchii of an acute character, such as diphtheria, may become chronic. I have seen several such cases, but in all of them the acute stage had been well marked, and the chronic condition seemed to be only delayed convalesence. (2) Croupous pneumonia may certainly become chronic, but so far as my own experience enables me to judge, the membranous exudate, if present, disappears with the acute stage.

The literature of the subject is quite voluminous in titles, as may be seen by reference to the index catalogue of the library of the Surgeon-General's office, but the number of cases is small.

Among the cases reported in our own country, one by Dr. W. C. Glasgow, of St. Louis, in a paper read before the American Medical Association for the year 1879, is especially noticeable. In this article the author embodies the experience of several of the more prominent physicians of the United States.

Dr. Richardson, of New Orleans, "in a practice of nearly a third of a century" had "never encountered a case of plastic bronchitis."

Dr. Geddings, of Aiken, South Carolina, had "never met with a case." It should be remembered that Dr. Geddings had a very large experience in lung troubles.

Dr. F. R. Porcher, of Charleston, had seen one case.

Dr. T. G. Simons of Charleston, had seen one

[1]Read before the Chicago Medical Society, December 20, 1886.

case, and had known of three others in the practice of other physicians.

Dr. Jerome Cochran, of Mobile, says it is unknown in that section of the country.

Dr. James H. Hutchinson, of Philadelphia, had seen one case.

Dr. H. I. Bowditch, of Boston, had never seen a case.

Dr. R. H. Fitz, of Boston, had seen four specimens of casts. Does not seem to have seen the patients.

Dr. T. Parvin had seen no cases.

Dr. Geo. P. Andrews of Detroit, had never seen or heard of a case in that region.

Dr. Roberts Bartholow had seen one well-marked case.

Dr. J. R. Leaming, of New York, had seen, in consultation, two cases.

Dr. Austin Flint, Sr., had seen three cases.

Dr. Gleitzman, of Ashville, North Carolina, had seen one case.

Dr. J. M. Da Costa, of Philadelphia, had specimens of casts from five cases; cannot say whether he had seen more cases.

Dr. Alfred Statle, of Philadelphia, sent report of one case.

Dr. P. E. Robinson, of St. Louis, reported one case.

Dr. Maxwell reports one case.

Dr. Samuel G. Armor, of Brooklyn, had seen "a few cases."

Dr. Frank Donaldson, of Baltimore, had seen one case.

Dr. Henry Gibbons, Sr., of San Francisco, had never seen a case during a practice of fifty years.

Dr. Charles Denison, of Colorado, had never seen or heard of a case in Colorado.

Dr. Baumgarten, of St. Louis, reports one case.

These facts collected by Dr. Glasgow in 1879, perhaps fairly represent the experience of the profession in America. I am, however, inclined to think that these meager statistics of the practice of some of the most active physicians and careful observers by no means give a correct estimate of the relative frequency of the affection. I imagine very many cases are never diagnosed, or if seen and recognized they are not recorded, and therefore lost sight of.

In the records of the literature upon this subject there are reports by L. H. Angel, *Chicago Medical Journal*, 1859, pp. 501 to 504.

J. S. Cohen, "Transactions of the Pathological Society," Philadelphia, 1876.

Austin Flint, Sr., *Medical Record*, 1874.

J. H. Hutchinson, "Transactions of the Philadelphia Pathological Society," 1874.

A. L. Payne, *Stethoscope and Va. Medical Gazette*, 1852.

J. C. Reeves, "Pathological Society," Philadelphia, 1859.

P. G. Robinson, *St. Louis Medical Journal*, 1878.

S. Rogers, "Transactions Medical Society of New York," 1866.

L. Smith, *Medical Record*, 1872.

T. H. Streets, *American Journal Medical Sciences*, 1880.

E. D. Worthington, *Canada Medical and Surgical Journal*, 1876.

These, in addition to the case reported by Dr. Glasgow, comprise all the titles I am able to find in the United States and Canada. They evidently include also some of the cases referred to in the correspondence reported by Dr. Glasgow and briefly summarized above. In some of these cases it seems to me there was simply an acute or diphtheritic inflammation running its course in a few days and terminating in death, with such symptoms as are seen in the ordinary forms of diphtheritic inflammation.

Among foreign authorities the reports are also meager. Eichhorst, in the last German edition of his work on special pathology and therapeutics, finds only 100 cases on record. The article in Ziemssen's Encylopedia gives a very clear statement of what is known as to the etiology and pathology of the affection. Among other writers Cheyne thinks old age predisposing; Valleix doubts this. Gintrac says that the larger number of cases are observed in adult life. If we exclude the cases of diphtheria extending to the bronchii, this is true.

The male sex is predisposed to the affection according to most authorities. Enfeebled health from previous disease, poverty, fatigue, exposure, are among the most common causes noted. Of course all these are so many synonyms for ignorance. The cause remains to be discovered. It may be some local colony of parasites. The relation of this disease to the ordinary forms of membranous inflammation in some of which bacteria are believed to be a pathogenic factor suggests this, and perhaps makes it probable.

The relations to antecedent disease are by no means constant; neither diphtheria, nor simple bronchitis, nor pneumonia, except in rare instances, eventuate in chronic pseudo-membranous inflammation of the bronchial tubes. Rugel says, "a special predisposition, or the influence of some special unknown agency is always essential in addition" to the hypothetical causes enumerated.

The pathology of the affection is better understood. There is an exudate which coagulates upon the surface of the mucous membrane. This is often laminated by successive deposits. In the meshes of this coagulum a few leucocytes are found. The membrane proper is not necrosed, but continues to produce epithelium and the exudate is pushed off by the multiplication of this epithelium which in turn degenerates, becoming fatty and purulent. It seems also to be certain that while the mucous membranes do not become the seat of necrosis they do become the seat of morbid processes, possibly similar to that which in the endothelium of blood-vessels determines the formation of a thrombus, and which in this case determines the formation of the plastic deposit.

The patient in the case which I beg to report is G. T. P., aged 37 years, a native of the eastern shores of the Adriatic. The family history on both sides is good. He enjoyed good health as a child and during early manhood; at 17 had a suspicious sore, but apparently escaped any other manifestations of specific disease; was for several years a sailor, but

abandoned that calling at the age of 25. Has been for some years keeping a saloon. Eight years ago he gives a history of pneumonia involving the right lung; was six weeks ill. His general health from that time was good, till in March, 1884, when he "caught cold." At that time he was in bed ten days, had cough with expectoration, but does not know what was the character of the matter expectorated; had pain in the right side, locating it in the mammary region, this was not severe, but it continued more or less at intervals to the time of consultation. The cough and expectoration also continued during the spring and summer with, however, upon the whole a slow improvement till four days before first seen, when he thinks he caught cold, cough became more troublesome and he spat up once only a little blood. He consulted me on August 23, 1884.

I found him a well built man, 5 feet 7 inches in height, dark hair and eyes, weighing when well, 147 pounds, but now evidently much reduced, 125 to 130 pounds. He stated that he had lost his weight since last winter; his appetite was poor; bowels torpid; urine normal in quantity but high in color; pulse 75, temperature 99.3, respiration 17 per minute, sleep fair, tongue coated. The cough and expectoration led him to fear phthisis, and the consultation was had with the expectation that there would be found evidence of that disease.

Upon inspection the chest was found to be noticeably flattened, but not more so on one side than on the other; over the right side and especially in the mammary region vocal fremitus exaggerated. Upon percussion there was found dulness over the whole right side, the left side normal. Auscultation revealed bronchial expiration over superior portion of right side, front and back. Left side normal. Cardiac sounds normal. The diagnosis then entered in the case book was a "pneumonia not completely resolved, with bronchitis." He was placed upon tonics, syrup hypophosphites with hydrobromic acid.

September 9. Seventeen days later, he came again, and in every respect seemed to be better. No physical examination was made, but he was ordered to continue the medicine.

September 16. After quite a severe coughing fit and the expulsion of a mass of what was found to be a cast of a large bronchus, he spat blood. The hæmorrhage persisted, and he was ordered extract ergot in capsules, and to continue the syrup hypophosphites and acid hydrobromic. The diagnosis was corrected so as to read "chronic pseudo-membranous bronchitis."

September 23. Bleeding continued two days after last visit, none since. Has had a great deal of pain in the inter-scapular region, not more on one side than the other. At times very tender to the touch at right of the eighth dorsal vertebra. This he describes as a "soreness." Has expectorated thin pieces of membrane since last consultation.

Physical examination. Find no dulness over the right side, or as the record says "no noticeable difference in the percussion noted on the two sides." This was one month after the first examination, when there was dulness over the whole of the right side. The breath sounds over the right side feeble, in every other respect normal. Pulse 68, temperature 98.6.

October 2. Had been doing well until yesterday, when he again coughed up a large cast of a bronchus. (I may remark that all of these which I saw were probably from the first and second size tubes, and were from two to four inches in length.) After this there came what he describes as pus streaked with blood, but the hæmorrhage not copious. The ergot had been stopped; he thinks he was better while taking it and asks to be permitted to return to it.

October 17. The casts continue to be coughed up; microscopically they consist of coagulated plasma with a few leucocytes. Since the last date, October 2, he had been taking balsam copaiba and oleores, cubeb, with the ergot. I was under the impression that the copaiba had increased the plasticity of the exudate. Keeping in mind the specific history in his early life I thought possibly that there might be some lingering impression still. I therefore put him on pot. iodid. 0.50 t. i. d.

October 25. Casts continue almost daily; continue pot. iodid. and add hydr. prot. iodid. 0.01 t. i. d.

November 5, his wife comes to the office, says that he has thrown off a large number of casts, and each is followed by copious hæmorrhage. Has continued to take the ergot, and is now a little better but weak; continues pot. iodid. and hydr. prot. iodid, and in addition ℞ elix. calisayæ 450. and acid. sulphur. arom. 50.00 grams, M. and take a dessert-spoonful in water three times daily.

November 21, patient comes himself. Has been better since last date. Has had no hæmorrhage, or but little. Still a few casts, appetite has improved under the tonic. Bowels regular and sleep good.

December 26. Has been doing well till recently, but is now evidently losing in weight and strength. Hæmorrhages from chest and occasionally from nose. Appetite poor. Bowels regular, or occasionally diarrhœa. This, however, does not persist. Has lancinating pains in the abdomen, more in the epigastric region. Coughs up very few casts, and these very thin and delicate. Has taken now the hydr. prot. iodid. since the 25th of October, 0.01 three times daily, and a part of the time 0.50 pot. iodid. He has also taken, according to the amount of hæmorrhage, ergot at his own discretion. Stop both ergot and hydr. prot. iodid. and take syr. fe. iodid. 1.00 t. i. d.

January 9, 1885. Has been feeling better for the last two weeks. Appetite fair, bowels regular, no more pains in bowels since change in medicine, cough less, expectoration mucus, occasionally tinged with blood. No free bleeding and no casts. Has some pain in chest, bilateral, and not marked at any one place. Pulse 78, temperature 98, respiration normal. During the last week in January his wife came, said that he was still coughing a little and that the expectoration was streaked with blood. I directed an emulsion of oleum terebinth., each dose containing 0.50 of the oil, three times daily, and to omit the ferri iodid.

February 4, he was visited at his home. He has expectorated no casts since December 26, 1884, but

continues to cough sputum streaked with blood, and occasionally very slight epistaxis. Is still taking the turpentine; thinks the cough is looser than when taking the iron. During the past week has had a good deal of pain, intermittent in character, in the lower half of the right chest; has been in bed for last three days because of this pain.

Upon examination find the motions of the lower right side restricted; on percussion, dulness over the lower third of right lung, line of dulness seems to change with change of position; breath sounds indistinct, voice sounds exaggerated. Friction sounds distinctly heard over anterior portion of chest when patient lying on back; less so when patient is sitting up. Diagnosed, pleurisy, question of effusion doubtful; a hypodermic needle was introduced with negative results. Chest was ordered to be painted with iodine. The turpentine was continued.

Dr. Frank S. Johnson, to whom I am indebted for the larger portion of these notes, had made this visit, and on his return from the patient, in the extreme northwestern part of the city, became seriously ill. I was unable to look after the patient, and I asked my friend, Dr. S. D. Jacobson, to take charge of the case. This was, I think, on the 5th of February, 1885.

I beg to add extracts from a letter from Dr. Jacobson, giving in a general way the further treatment of the case:

"As to my ideas about the therapeutics of this case I can be short. I am not troubled with an *embarras de richesse*, but rather find my excuse in the old saw, *simplex sigillum veri.*

"The case was to me one of great interest, having never seen a similar one in twenty-five years of practice, and finding little or no mention of such cases in the books at my disposal. True, I have had one case of bronchial croup, which terminated fatally in a couple of days (a man about 48 years old). But your case had already been under your care and observation for several months before I saw him.

"During the earlier months of my attendance he was about the same as when you saw him, intensely harassing cough with dyspnœa until relieved by the expulsion of greater or smaller masses of bronchial casts, which relief was generally paid for by severe hæmorrhages, which told on the little strength he possessed before, so that he not only dwindled down to a skeleton-like appearance, but when able to sit up his legs would not support him, and his hands grew so weak that he could not for some time lift the spoon to his mouth. During the summer of 1885, he improved some, but the fall and winter reduced him below his former level.

"Having no authorities to guide me in the treatment of such a rare case, I applied the general principles to the best of my abilities. I had two indications before me, (1) *indicatio symptomatica*, and (2) *indicatio morbi*. As to the first class, I had in view the cough, dyspnœa, hæmorrhages, weakening of all the organs and functions. Those I tried to meet by the exhibition of *solventia, expectorantia, narcotica, styptica et roborantia.* As to the *indicatio morbi* I was more in the dark, knowing almost nothing about the pathology or etiology of this disease. But I reasoned like this: Since our pathology seems to drift more and more into bacteriology, it is but just that our therapeutics follow suit and be more in the nature of bactericides and antiseptics. In this light I wish you to judge my prescriptions containing such poisons as arsenic, iodine, bi-chloride hydrarg. and iodoform, which appear in many of them.

"I must confess that my success was a great deal more than I dared hope for, and though I firmly believe in the *vis medicatrix naturæ*, I also believe that a physician can be, and should be in the words of Lord Bacon, '*medicus naturæ minister et interpres.*'"

During the summer of 1886, and again within the last few weeks, I have seen the patient, and find him perfectly recovered.

4 Sixteenth Street.

THE PROFESSION AND PRACTICE OF MEDICINE

In Some of Its Relations to Human Society.[1]

BY S. M. HAMILTON, M.D.,

OF MONMOUTH, ILL.

This is a subject of great width, in its entirety. The history of medicine may be very appropriately included in the investigation, as well as an almost interminable biographical account of its representative members. But at present we will only try to give a few suggestions: first, as to the mutual relations between the profession of medicine, as a profession, and the public; second, as to the true *status* of the individuals who pretend to practice it.

The healing art, as it is sometimes called, is so old that no one can tell when it originated. It is quite probable that, with the exception of the priestly office, and those occupations and professions growing directly out of man's physical wants, it is the most ancient of all. I cannot tell whether it was from the first a part of the priestly office to minister to the ills of the body as well as the soul. But it is a fact that what we call the "historical era" found the profession and practice of medicine wholly in the hands of the priests. The Mosaic Law sets it down as a part of the priestly office, and the cure of disease through religious rites and ceremonies is a part of the Jewish creed. These rites and ceremonies, we are expected to believe, and do believe, were conditions to cure, enjoined by the Almighty. But curiously enough, coupled with them in all cases are certain things which the afflicted person must do for himself, to secure the result desired. There are instances, to be sure, of miraculous cure of disease, where the means employed seem to have no rational connection with the result. But, as a rule, there is laid down to the patient a set of rational sanitary laws, which he must observe just as rigidly as the religious rites of the priest.

The rite of circumcision was instituted as a sanitary necessity, beyond doubt; and it was made a part of the religious code of the Jews, merely to insure its observance. The evidence is conclusive that venereal and syphilitic disease existed to a prodigious

[1] Read before the Monmouth Medical Club, October 6, 1886.

extent among the ancient Jews. There cannot be found in the writings of Ricord or Hunter a more vivid description of these forms of disease than that set down in the Levitical law. Clearly this physico-religious rite was instituted for the purpose of controlling and restricting (as it does to some extent) the spread of this terrible disease, which we now call syphilis.

I do not know why the all-wise Creator did not reveal to his chosen people the knowledge of drugs useful in medicine and the different modern surgical appliances, for the relief of his suffering children. We only know that he did not. I presume that, in the plan of the universe, it was best that man should be required to do for himself everything which lay within the compass of his own powers of mind and body. Considering the status of the healing art in these far-off days, and for many succeeding ages; the prominence which faith in mere forms, and otherwise meaningless ceremonies, held in the cure of disease, it is easy to discover the key to many problems in mental philosophy which have sorely puzzled some of us in modern times. Mental lopsidedness is a subject of heredity as much as an ill-shaped leg or a crooked nose. Mental characteristics of any and every kind descend in long lines from parents to children, quite as often as physical peculiarities of form. It is not wonderful, then, that exaggerated ideas of the power of "faith without works," charms and meaningless ceremonies, and superstitious rites, as agents in the cure of disease, should have been bred into the mental and moral texture of the race.

We see every day intelligent men, who manage their family and pecuniary interests, their political and religious affairs, with the utmost sagacity and good common sense. In these, as in every other thing touching their duties to God and man, they will be satisfied with nothing less than a good sound reason for the adoption of any proposed line of conduct. Not all, but many such men, when brought face to face with disease, in themselves or in their friends, are satisfied with nothing that looks like reason. Something supernatural, something outside the domain of human reason, alone will satisfy them. In their mind "the seventh son of a seventh son," no matter how ignorant or inexperienced, has peculiar adaptability to the cure of disease; that this or that individual is endowed by the Creator with the power of healing by touch of the hand; that faith, and not works, is the healing power for all earthly diseases. The "prayer cure" of disease is one of the delusions which seems to have fast hold of the convictions of many good ignorant people. If there is one thing clearly taught in revelation, and shown by the light of experience and reason, it is that God helps those who help themselves. He has given to mortals brain, bone, and brawn, by the proper exercise of which he is required to provide for his natural wants. Food and raiment come to him by the "sweat of his face." Every material good, every creature comfort, every intellectual pleasure or triumph, is obtained only in one way—by paying the price, in human effort or human anguish, which the God of nature and grace has set upon it. Even spiritual blessings, and all of the many things affecting the immortality of man, are no exceptions to this rule. All are obtained by the blessing of God upon human effort. "Faith without works" occupies the same contemptible place in the cure of disease, which it holds in the salvation of the soul. In both cases "faith without works is dead."

I do not lose sight of the fact, for it is a fact, as well authenticated as anything in history, that the God-Man, whilst on earth, miraculously healed the sick, and conferred the gift upon certain of his followers. Evidently it was the purpose to convince the wicked world of his divinity, and to show the depth of his sympathy for human suffering. But the Great Physician and his coadjutors have retired many ages ago, and left us to cure our own diseases, and even to work out our own salvation, with fear and trembling. I know of no promise of the salvation of the soul without the concurrent work of the soul itself.

The mission of the medical profession, in the minds of many good people, is to discover and present to the world a set of specific remedies for all the ills of the human body. That disease is a fixed and unvarying quantity, is assumed. The truth is that, even in most cases of what we call "acute diseases," the causes have been operating for months, perhaps for years, and the exact form of local manifestation was brought about by some seeming trivial and so-called accidental circumstance, such as exposure to cold, or great heat, or exhausting fatigue, although the remote cause had been operating in the general organization for months or years. In cases of death from local disease, post-mortem investigation often establishes the fact that not one, but several, sometimes all of the vital organs, were implicated, making it difficult to tell, even by careful examination, which was the original and which the secondary affection. Disease in general has been defined "a deviation from health." A good definition, as a short answer to an apparently plain question, but utterly worthless as an answer to an abstract question. It would have perfect mathematical correctness, if the term health could have a fixed, standard value. But it has not. Really, what is health in one, is a condition of disease in another; and as no two human faces, nor no two human voices, are exactly alike, so are there no two human organizations whose physical construction, or whose organic operations, are exactly alike. The definition is true, but it must be restricted to the single physical organization in question, and no other. So long as mankind is born into the world with diverse temperaments, and hereditary weaknesses and hereditary vigor peculiar to themselves; so long as some are rich and some poor; so long as vice and crime walk side by side with honesty and virtue; so long as ignorance and filth shall have their kingdom within the kingdom of intelligence and cleanliness—just so long will the treatment of disease by specific medication be a failure.

The natural sciences as applied to the investigation of disease are of immense value, but their usefulness is bounded by barriers which they cannot pass. As an illustration, take the human eye. It is a purely physical machine, for appropriating and condensing the rays of light, and transmitting to a background

the color, shape, and comparative size, of objects within a certain radius. Its construction can be exactly imitated. The form, size, and function thus far, can be produced artificially. At this point physical science halts, very far indeed from the goal of complete enlightenment. To all appearance it is an eye in form, size, color, weight, all perfect in reflection, refraction, and condensation of light, but it cannot see. What we call "vital force," "vital agency," in the animal economy, is beyond the piercing ken of physical science, and ever shall be, so long as the intellect of man is fenced in, and besmirched with the mire of this world, and its imperfect life. A great teacher (I believe Sir Everard Home), in lecturing to his class on the human stomach, says: "Some have called this organ a *retort*, some have called it a galvanic battery, and some have called it a *mill*. Gentlemen, it is none of these. It is a stomach." I know of no three lines in medical literature more suggestive of broad, comprehensive truth than these.

The operations of the stomach simulate in some degree all of these physical machineries; but, as in the case of the eye, above and beyond all these there is the vital power, so-called, which utilizes all, and without which they are but useless appendages to the human body. The machinery through which this vital force acts is of itself exceedingly complex. Most organs of the body have yielded to the anatomist and physiologist the secrets of their functional life. Others, after ages of painstaking investigation, are imperfectly understood, or not at all, to this day.

Let us be modest. Let us claim for ourselves just what is our due and no more, a place in the "republic of letters." Not a science, strictly speaking, but a department of human learning of which we may well be proud, gaining, ever gaining, in the strength and power which increased knowledge gives. The best work of the physician of to-day is to try to discover the causes of these deviations from health, make all possible efforts to remove or avoid them, and when his case is incurable, to alleviate what he cannot cure.

I had thought of saying something as to the claims of our profession upon the public. The old satire about the attorney pleading his own cause will no doubt suggest itself to you at once. But the pungent epigram loses its force, when applied to us. We have no beggar's petition to offer, and will not tax the benevolence of the "dear public" by asking gratuities. We ask the public to treat us as we try to treat disease, each one on his own merits. It is their right, and their duty, to scrutinize with the greatest care the conduct, professional and personal, of any man, presumably cultured, occupying a place of responsibility in which are wrapped up, very often, their nearest and dearest interests. It is their right and their duty to mark with the broad brand of condemnation every failure short of professional integrity and personal honor. As a profession, we have no right to demand favorable recognition at the hands of the public. Profession of angelic purity oftentimes covers from human eyes a heart and a secret life black with crime. In this great and beneficent profession of ours there are dark paths which, unhappily, do not always lack wayfarers to walk therein. But as honest practitioners of a legitimate calling, so long as we worthily represent that calling, we do not beg for, we demand, and generally get, respectful consideration.

It should not be a discouragement to the honest members of our profession, that we find in it many who are dishonest and unworthy. All professions have them; the clerical, the legal, the medical; and I have heard that there are a few bad men outside of all these. Humanity is weak, and imparts the odor of mortality to everything he touches with his foul and feeble hands. The contest between virtue and vice, in high places and low, is the business of the race, so long as it inhabits this planet. The contest is long, the progress slow, but sure. Our profession should do, and I believe is doing well its part toward the great result. Every one should add his mite, first in self-improvement and self-culture to a higher plane of personal and professional position, and next to the improvement of our fellows. If we can do no more, let us put ourselves in the right, and *wait*. The great poet says:

> "They also serve, who only stand and wait."

It is a maxim in political economy, that a demand for any article of commerce, good or bad, will create a supply equal to the demand. It is true of the moral as well as the political world. Create a demand in community for any species of crime, and criminals are ready at hand for their perpetration, for a "consideration."

I know of no deeper disgrace to the intelligence of the age, and the boasted Christian civilization of this nineteenth century, than the criminal disregard of human life which pervades society from top to bottom of the social scale. I do not allude to the nightly brawl over the wine-cup, or the midnight and stealthy murder for money or revenge, or the many ways in which men are done to death by knife, or bullet, or poison. These are bad enough and plentiful enough for thoughtful consideration, but not properly within the scope of this paper. The moral obliquity which ignores the responsibility of the parent for the lives of unborn children, is the most discouraging and alarming feature of this age. Unlike other crimes against God and society, it seems to grow rather than diminish with increasing intelligence and refinement. We hear a great deal of talk now-a-days about the restricted sphere of woman, the rights of woman, the little power she has, compared with what she ought to have, woman suffrage, etc. I am aware that this subject should be approached cautiously, as becomes the worldly wise, for these dear creatures, despite their own assertions to the contrary, have a mighty influence for good or evil, and they are not backward in their resentment of real or fancied injuries, and encroachments upon their rights. We will venture to suggest, very mildly and with the profoundest respect for true womanhood wherever found, that women would do well, first, to discharge the duties pertaining to the rights they already have, before demanding so loudly a more extended sphere. In the scramble for their own rights, so-called, let

them not forget the rights of their own children, which they, of all others, should be vigilant in preserving. And the first and most important of these is their right to be born. That the primary guilty party, in the production of criminal abortion, is generally the mother, cannot be successfully denied. Not always the first proponent of this measureless crime, but a consenting party to it, she is always. It is with unspeakable sorrow and regret that we are forced to the conclusion, after much observation, that she is, as a rule, guilty from first to last. The most humiliating and discouraging aspect of the case is, that this crime against God and nature is much more prevalent among the cultured and religious people of the country, than among the ignorant and depraved. As a rule, the uneducated mother, untrammelled by the bonds of fashionable life, and its dissipations, hearkening to the voice of God speaking to her through her maternal instincts, loves her offspring, and cares for it to the best of her ability. It is not held that mental culture, wealth, and high social position, are necessarily productive of the moral obliquity necessary to the commission of this great crime. Nor is the indictment against the class without exception. I do know that of these, there are very many of the best of mothers, who put first and foremost of all the duties of life the care and proper rearing of the children which God has given them, whose lives are blest each day by duties well performed to this end, who recognize in the home circle not only the widest sphere of action within the capacity of any human being, but one which secures to them the best possible field for a useful and happy life. Nevertheless, it must be conceded that to this class of people, namely, the educated, refined, religious and fashionable, a very large measure of guilt must be awarded.

While it is true that the impulse to this crime is often the offspring of ignorance of its true significance, and a plain relation of the facts is all-sufficient to convince the judgment and regulate the action of the deluded mother, I but state the facts in the experience of every physician, when I say that in an astonishing number of cases, his pleadings and demonstrations will be met by ears that hear not, and a mental vision which will not see, be the light ever so clear; and a perverted moral sensibility and recklessness frightful to behold. Reason and entreaty are thrown away upon such, and she invariably rewards her faithful medical adviser with undying hate and ceaseless persecution. She goes on in her evil way, stifling the pleadings of her own better nature, and the almost irresistible conclusions of her reason, deliberately taking upon herself a load of remorse and vain regret which will stick to her, like the shirt of Nessus, to her dying day. Reason with her as you may,

> "She is convinced against her will,
> And of the same opinion still."

This and other disgusting expedients, aimed at what is called very mildly, control of population, have already told disastrously upon the natural increase of this best class of society.* It is so pronounced as to excite the alarm of thoughtful men all over the land. The bulk of our increase is from the poor and depraved classes, and from the foreign population. It is a shame to American civilization that our educated women must be outdone, in this highest of all moral duties, by their less favored sisters.

I suppose that the criminal jurisprudence of the civilized world cannot show anything more curiously absurd than the English law on this subject. Up to about ten years ago, the production of an abortion previous to the fourth month of utero-gestation, was in law merely a "*misdemeanor*," punishable by a ridiculously light fine. After that time (which they called the period of quickening), the same act was called "murder," and invoked the death penalty on proof of guilt. It may be that this absurd law, based upon imperfect physiological knowledge, had much to do with misleading all English speaking peoples as to the time when responsibility for human life begins. In the light of what we know now of the laws of life, it seems strange that any one should be misled in the matter, law or no law. Be the causes what they may, of a certainty the minds and consciences of our people are fearfully warped out of the straight in this direction. A large and steady demand for the services of the abortionist is created, and the supply to satisfy it is, of course, not lacking. It is hard, but we must admit the disgraceful fact, for it stares us in the face at every turn, that this demand is largely filled from the ranks of the educated practitioners of medicine. Is there any plea in justification, or even in palliation for such men?

Thus stands the case. He pretends to practice an honorable profession, stands well in society, perhaps well in the church. He has studied and understands the physiological principles involved. He knows that, from the instant of conception, the subject of it is just as much a human being as it ever is afterward; that it is, from that instant, as much the subject of responsibility as it ever can be, and that to interfere with the development just begun is deliberate murder, and if done or connived at by him, a sin against the clearest light and knowledge. In place of acting the part of an educator of the ignorant as to their duties, and refusing to be a copartner in their guilt, he assumes the position and function of a hired assassin for a pitiful sum of money.

It may be said by way of excuse, that many women who commit this dark crime, know not what they do. They are ignorant or thoughtless as to their true responsibility to an unborn child. But what excuse is there for the educated physician?

It is not just to arraign the medical profession as a whole, for the misdeeds of these unworthy members. From the American Medical Association down to the smallest local societies, the profession collectively has borne the strongest testimony and adopted the strongest official declarations against this crime. It must be confessed, however, that among the honest and true members of the profession there is a lack of courage in confronting this evil; a kind of moral cowardice which prevents him, for fear of losing patronage, from exercising his whole power and influence as an instructor and mentor to the ignorant and thoughtless. I do prefer to attribute a very large part of this

great crime to ignorance, rather than to out-and-out wickedness. And for this lack of information I hold the right-minded, honorable members of the medical profession largely responsible. They are the natural and proper teachers of the community on this and kindred subjects, and I honestly believe, and am sorry to believe, that they have but poorly discharged their duties.

We cannot dodge our responsibilities in this matter. We must be missionaries, devoted to the cause, until this heathenish darkness is dispelled, and this heathenish practice driven from our fair land. Above all, let us all do our best to educate the head and the heart of that fairest and most lovely of all God's creatures, the American girl, so that she may avoid this soul destroying crime against God and her own flesh and blood.

NOVEL METHODS OF TREATING DISEASES OF THE MIDDLE EAR.[1]

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In diseases of the middle ear, attended with increased and perverted secretions, the surgeon often feels the need of methods more effectual than the old ones for evacuating this cavity. Serum and mucus may be absorbed if they are not too abundant, but in frequently recurring attacks of sub-acute inflammation, such as occur in persons subject to naso-pharyngeal catarrh, nervous coryza, etc., the secretions are so profuse and attacks follow each other in such rapid succession, at certain seasons, that the middle ears contain mucus for periods of considerable length. Absorption may not occur after one attack before another supervenes. Unless these secretions can be removed, progress toward recovery is impeded, and the hearing is seriously impaired.

Instead of relying solely on the old methods of evacuation by injections into the middle ear, paracentesis of the membrana tympani and inflation, I have employed a treatment so simple that patients may practice it unaided. I have never seen such a method published, but I believe that its beneficial effects in a large class of cases entitle it to a place in aural therapeutics. This method is the reverse of the Valsalvian experiment. The patient closes the mouth and nostrils and exhausts the air in the naso-pharynx by a strong inspiratory act. This causes the ejection of the column of air and the secretions from the Eustachian tube and tympanum into the pharynx. The success of this practice becomes apparent in several ways. On evacuating the middle ear one experiences at first the subjective sound of rushing air, followed by the sensation of a movement inward of the drum head and ossicula. These sensations are accompanied with crackling sounds, comparable to fine mucous râles. After the discharge has entered the throat it may be seen on inspection with the rhinoscopic mirror, and sometimes without it, covering that portion of the wall of the pharynx corresponding to the side with the affected ear, if but one ear is diseased. When the patient clears the throat the evacuated secretions are forced into view upon the column of the fauces. Sometimes after expectorating the discharge a peculiar, disagreeable taste is left on the tongue. It has been compared to a metallic taste, when I have found a mixture of mucus and pus escaping from the tube. After removing the discharge the patient is directed to swallow, or practice the Valsalvian experiment, whereupon the air re-enters the middle ear and restores the equilibrium of atmospheric pressure on both sides of the drum head. A sense of relief from pressure, and increased hearing distance, follow. One should not inflate the middle ear too soon after practicing this method, else the tube and tympanum may not be emptied completely, and the entrance of air through the tube may force some remaining fluids back into the tympanic cavity, where they will be retained until the next treatment. That the discharge does not emanate from the nasal cavities is apparent from the rhinoscopic examination, and from the fact that it occurs when there is no concomitant naso pharyngeal catarrh, and the peculiar taste is experienced only after each evacuation of the ear. When the contents of the tympanum are of too great consistence, or too tenacious, to pass readily through the tube, we may liquefy them by injections of warm water solutions of salt or soda, so as to render their expulsion possible.

There are cases in which this method is impracticable owing to resistance in the tube. Its walls may participate in the tympanic inflammation and become so swelled as to close the passage into the middle ear, or the walls of the tube may be agglutinated together by adhesive secretions. Yet after ineffectual attempts, success has often rewarded repeated efforts, and a threatened rupture of the membrana tympani has been averted. A short, spasmodic effort may not suffice, when an inspiratory act, prolonged for the space of five or ten seconds, may succeed. If it does not, the surgeon may diminish the resistance to the passage of air through the tube by the use of astringent Eustachian bougies, or washes, when the occlusion is due to swelling of the walls. When the stoppage is attributable to the presence of secretions, the following method may be resorted to: A vulcanite syringe may be introduced into the Eustachian catheter *in situ*. Gentle traction may be exerted with the piston rod so as to suck the contents of the tube into the catheter. By this means the tympanic cavity, as well as the tube, may be emptied. The curve of the distal extremity of the catheter should be so adjusted that the axis of the beak shall correspond to that of the tube. Otherwise the part of the tube impinged upon might be drawn into the opening of the catheter, which would prevent the escape of fluids and occasion some irritation. The syringe should be easily manageable with the thumb and fingers of one hand, and the piston should fit the cylinder perfectly, to insure success. A Politzer air balloon, without a valve, may be substituted for the syringe. The air bag, exhausted by compression,

[1] Read at the Annual Meeting of the Illinois State Medical Society.

may be applied to the catheter and allowed to expand, thus causing a vacuum in the catheter, to fill which the secretions vacate the tube. After resistance in the tube has been overcome by this means the more simple method will probably succeed.

When the inflammatory process extends to the mastoid antrum and cells, and they are filling with secretions, it will be readily seen how much more rational these methods are than that of inflation. The latter practice forces the discharges in the direction of the mastoid cells, while the methods which I propose withdraw them from that locality. Indeed, when there is no concurrent mastoid disease, it need not be emphasized that the act of forcing the unhealthy secretions from the tympanum into the healthy mastoid cells is performed at the risk of inducing a grave complication. Either of the methods I propose is easily practiced, the one by the patient himself, the other by any surgeon who has had some experience in manipulating the Eustachian catheter.

The first method is also applicable to a different class of cases from those previously mentioned. It is serviceable in chronic catarrhal inflammation of the middle ear with proliferation of the mucous tissue, bands of adhesion between the tympanic walls and the ossicles, partial anchylosis in the chain of bones and retraction of the membrane. By repeatedly alternating this method with the Valsalvian or the Politzer method of inflation, the air is alternately rarefied and condensed in the middle ear. The effect of this practice is to cause, by rarefaction, a movement inward of the drum head and motion in the articulations of the ossicles with each other, and of the foot-plate of the stapes in the fenestra ovalis; and, by condensation, the reverse movement. It is evident that by this means the bands of adhesion are stretched, and perhaps divided, and stiffness of the joints is prevented or modified. I employ this treatment on the principle that motion prevents or overcomes anchylosis, as one sees demonstrated frequently in general surgery. It has an advantage over other methods in that patients are able to practice it unaided by a surgeon, and catheterism can be omitted. These are important considerations in the treatment of sensitive and fastidious or indigent patients. If they are unable to inflate the middle ear by the Valsalvian method, they can be instructed in the use of the air balloon. I have observed the hearing distance rapidly increase when no other treatment than this passive motion was employed. It is apparent that as the freedom of motion is restored in the sound-conducting apparatus it becomes possible for it to respond to sound waves, to the vibrations of which it was not before susceptible.

When this method is not successful, on account of an impermeable tube, I have resorted to another device which does not depend for its success on the condition of the Eustachian tube. I use a rubber tube of suitable calibre and length to fit into the patient's external auditory canal and extend to the mouth. By alternately rarefying and condensing the air in the external meatus he obtains the same movements in the conducting apparatus as were performed in the former experiment. To accomplish the same object I use Siegle's pneumatic otoscope. The advantage of this instrument is that the surgeon inspects the drum head during the treatment, and ascertains the degree of its mobility.

In closing, I will briefly describe one other method of treatment, which I have never known any other surgeon to use. I employ it for the purpose of applying various medicinal solutions to the walls of the external auditory meatus, tympanic cavity and Eustachian tube, without the aid of the Eustachian catheter. If the middle ear is discharging pus through the perforated membrana tympani into the external meatus, these cavities are thoroughly cleansed. Then, the patient's head being inclined to the opposite shoulder, the meatus is filled with the warm solution. The patient is then directed to exhaust the air of the middle ear by practicing the experiment I have already described. This effects the evacuation of the fluid in the external meatus through the middle ear and Eustachian tube into the nose or throat. In those cases where the Eustachian tube is patulous this is accomplished with little effort by the patient, and the tympanum and tube are thoroughly treated. In this manner I have used solutions of boracic acid, zinc sulphate, carbolic acid, mercuric bichloride, etc., with the happiest results.

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MEDICAL PROGRESS.

A NEW MICROCOCCUS AS THE PATHOGENIC AGENT OF INFECTIOUS TUMORS; ITS RELATIONS TO PNEUMONIA.—DR. MANFREDI has recently made some researches in regard to the pathogenic agent of morbillous pneumonia in the case of two persons dead of measles complicated with pneumonia. No autopsy could be obtained, and the experiments were made with the saliva, the lachrymal secretion, and scrapings from the skin. The following is a résumé of the results obtained:

In the two cases the sputa contained constantly, and independently of the pneumococcus of Friedländer, a specific micrococcus endowed with very pronounced pathogenic properties, to which he gives the name "*micrococcus of lymphoma or progressive granuloma*," which, when inoculated on animals, gave rise to particular pulmonary lesions analogous to those of pneumonia. From the lack of necroscopic examinations and on account of the small number of cases on which the researches were based it is not yet possible to say what part this microbe plays in the pathogenesis of secondary morbillous pneumonia.

The micrococcus has an ovoid form, is often seen as a diplococcus, and measures about 0.5μ. It develops tolerably well in all the common cultivating media, and the growth of the cultures is very rapid when air is freely furnished. On thick gelatin, on which typical cultures are obtained, the colonies are presented as discs, first thin and of a blue tint, then thicker and of a pearl gray color, with excavated borders and almost always a nacred reflex on the

surface. The growth and multiplication of this micrococcus causes a very marked rarefaction of the cultivating medium. In studying the influence of temperature and dryness on the cultures, it was found that the micrococcus develops in two distinct forms: a transitory and a more permanent.

Inoculation experiments were made on dogs, rabbits, guinea pigs, mice and birds. With the exception of the last, which succumbed to what seemed to be blood-poisoning, all the animals presented only one form of pathological manifestations, which was most clearly seen in the rabbits and guinea pigs. Of a total of 80 animals experimented upon only four were refractory and escaped fatal consequences from the inoculations. The micrococcus possesses very pronounced infectious power, which seems to be chiefly exerted upon the respiratory apparatus. This virulence is endowed with a capacity of resistance which is remarkable, persisting in the cultures for several months, and resisting successive passages through the animal organism, as was shown by series of inoculations on the animals. It resists dessication to a marked degree.

As a rule the animals died from the seventh to the twelfth day. At the autopsy there was enormous tumefaction of the parenchymatous organs, principally of the spleen and lymphatic ganglia. The tumefied organs were studied with gray or grayish-yellow nodules. Independently of the nodules the lungs contained the characteristic lesions of a more or less extensive pneumonia, even in the stage of hepatization, even when the inoculation was made in the subcutaneous cellular tissue. The nodules belonged to the class of granuloma, or infectious tumors with granulations. They usually go on to calcification, which begins at the centre; they contain the specific micrococci, and are infectious.

This new micrococcus usually leads an intracellular existence, and its pathogenic action consists in provoking caseous necrosis of the parenchyma of the cellule. More rarely they are found outside the cellular elements, and very exceptionally in the vessels. In the foci of degeneration and necrosis developed about it this micrococcus is not killed, for it can exist in a state of great rarefaction or dilution of the elements necessary for its existence.

The pathogenic action of this schizomycete is exerted principally on the lymphatic system, which represents at the same time both the port of entry of the infection and the most favorable medium for the development of the infectious agent. When the latter is inoculated into the subcutaneous cellular tissue there is formed, at the seat of the inoculation, a nodule which often grows very large, and which is made up of a plastic exudate on the way to caseation. It is in the centre of this nodule, which is the centre of a violent inflammation, that the lymphoid cells are penetrated by the micrococci, and thence transported to the lymph vessels in the vicinity. Along these vessels there are formed a series of small disseminated inflammatory nodules; and thus the whole system is infected.—*Gazette Méd. de Paris*, December 4, 1886.

Gaseous Rectal Injections in Respiratory Diseases.—M. Cornil read a communication on this subject at the meeting of the Académie de Médecine on October 19, 1886. The principles of the action of gaseous injections and their rapid elimination by the lungs, as given by Cl. Bernard, who showed that when sulphuretted hydrogen was injected into the recta of animals the gas was eliminated by the lungs; and he showed that it may be thus injected for a long time without causing accidents, while its introduction through the natural air passages causes serious results. This gas, however, is not well tolerated by the intestines. Carbonic acid gas, on the other hand, is well tolerated by the rectum and large intestine; it is rapidly absorbed, and eliminated by the lungs with the medicamentous gases which are incorporated with it.

In July M. Bergeon published the results obtained in the treatment of pulmonary phthisis by rectal injections of carbonic acid gas charged with medicamentous substances. He now gives his further results: Physicians of Lyons, Paris, Geneva, and Marseilles, who have treated phthisical patients by this method, have generally obtained the result of seeing the signs of pulmonary suppuration disappear, and the rapid downward course of the disease turned towards a state of health which promised cure. As regards the patients treated by me during the past two years, I can affirm that the results announced in July are confirmed and generalized. The phthisical patients whom I considered cured no longer have expectoration; and on auscultation there are only the dry stethoscopic signs of cavities or of cicatricial formations from old lesions. Some of these patients have to work very hard, and undergo excessive fatigue, but the improvement has been steadily maintained. The expectoration is very markedly diminished, in fact amounting to almost nothing now.

Whatever may be the action of these injections it is certain that they render hæmatosis more easy and more complete. They cause a sensation of well-being which is accompanied by an increased power. M. Bergeon gives the following directions for the use of carbonic acid gas for this purpose:

1. The gas should be as pure as possible, so as not to make a disagreeable impression on the intestine. That which is obtained by the reaction of dilute sulphuric acid or bicarbonate of soda is always perfectly absorbed by the intestine without causing any disorder.

2. The gas should be collected in a receptacle previously completely freed of air; and the tubes of the apparatus should be so fixed that no air can enter the bowel, as it will cause meteorism and enteralgia.

3. The injection should be made before a meal, or three hours after. The instruments should be so made that the physician may accurately gauge the amount of gas thrown into the intestine, and the amount of pressure exerted on the intestinal walls.

Great care should be taken with regard to the medicinal substances used; turpentine, chlorine, ammonia, iodine, bromine and ether cause inflammation of the intestinal mucosa.

Dr. Chantemesse has used this method at the St. Antoine Hospital for three months, with the following results: Attacks of asthma cured by injections of carbonic acid gas charged with sulpho-carbonated vapors. In some of these cases the effect was quickly seen during an asthmatic attack. Pulmonary tuberculosis was treated with the same mixture, and with excellent results.—*Bulletin de l'Académie de Médecine*, No. 42, 1886.

TREATMENT OF PROLAPSUS ANI IN INFANTS.—DR. BETZ, of Heilbronn, relates in the *Memorabilien*, 1886, Heft 4, the case of an infant five months old which had been afflicted with prolapsus ani for five weeks. Cold water enemata, ice suppositories, dusting with pulverized alum, tannin locally and internally, opium, bromide potassium, and even injections of ergotine had been employed without benefit. The little patient was in a deplorable condition, greatly emaciated, covered with large and small boils, and intertrigo; it was incessantly straining and crying. The prolapsed bowel was a livid, conical plug, 5½ cm. in length; it was readily reduced, but pressure being removed it was shot out again by the straining of the child. Profiting by a knowledge of the treatment previously used, he at once determined to resort to nitrate of silver applications, but as the application of the stick caustic always acts unequally on the mucous membrane, and may result in ulceration, he made a solution of argent. nitr. 1.0, sulphuric ether 5.0, alcohol 25.0. This solution, though it gives rise to some smarting, can be evenly and equally applied and enters the tissues to a considerable depth. The prolapsus was thoroughly painted with the above solution, and even after a few minutes it became paler, began to shrink, and could be reduced more readily. To act on the upper portion of the mucous membrane a small piece of alum was introduced high up into the rectum. To prevent the bowel from slipping down, and to exert continued pressure on the anus, the nates were firmly pressed together and held in this condition by three broad strips of adhesive plaster, which were applied on either side, running from the anterior surface of a thigh across the seat to the opposite anterior surface of the abdomen. The next object was to stop the tenesmus and to prevent defecation, which was accomplished by keeping the child slightly under the narcotic influence of opium, and restricting its diet to small quantities of milk and water. The tenesmus stopped at once, and flatus was freely passed in twenty-four hours. The dressing was reapplied after two days. No prolapse occurred. The anus was cleansed with a wad of cotton steeped in carbolized oil, five per cent., and a piece of alum was again inserted. The anus was found drawn into folds and contracted. After three days a new dressing was necessary. The gut being slightly prolapsed, was treated with the stick caustic. Two days later the dressing was permanently removed. Stools came on without tenesmus. In order to insure contraction of the anus, he ordered it touched with alcohol for a few days. The cure was completed in eight days. Betz, though he is inclined to attribute much of the rapid success to the application of nitrate of silver, claims that the combined treatment carried out by him is entitled to the credit for the same, and would in a similar severe case not do without the adhesive dressing, the opium, the restricted diet and the alum suppository, in addition to the nitrate of silver application, while in a milder case nitrate of silver, opium and restricted diet would be sufficient for a cure. No relapse occurred.

REGENERATION OF THE SPLEEN AFTER EXTIRPATION.—A. ETERNOD reports an experimental case on a fox, four months old, from which the whole spleen was removed. It died 161 days after the operation, and the autopsy showed the following peculiarities: 1. Partial regeneration of the spleen, consisting in the new-formation of a splenic nodule, having anatomical connection entirely different from those which supernumerary spleens have under ordinary circumstances. 2. A new formation of ordinary tissue in the ganglia and Peyers's patches, in the adipose tissue of the mesentery, and even in the hepatic lobules. 3. Transformation of the ganglionic parenchyma, old and new, in the splenic parenchyma. 4. Diminution in the quantity of the blood. 5. Increase of the adipose of the mesentery. These results agree, in a general way, with those obtained by Tizzoni, Griffini, and others in experiments on the dog.—*Revue. des Sciences Méd.*, July, 1886.

TO BREAK UP A HYSTERICAL PAROXYSM.—RUAULT, of Paris *(L'Abeille Méd.)*, has often employed firm and continuous compression of some superficial nerve. The supra-orbital nerve is especially adapted for this purpose. The patient's head being firmly held between the hands of the physician, he places his thumbs on the inscisura supra orbitalis and makes gradually increasing pressure. The effect is said to be as follows: The patient begins to contract her facial muscles as if in pain, gives vent to short screams, makes four or five short inspirations, the thorax remains fixed in inspiration, the dorsal and nuchal muscles contract to hyperextension of the spine. Now a deep expiration takes place, the muscles relax, the paroxysm is over. The pressure may have to be repeated, as a new paroxysm may come on after a short time, and resorting to it early may intercept the attack. The sooner the paroxysm comes under treatment the more rapidly will it be broken up by the maneuvre.—*Memorabilien*, Heft 2, 1886.

NEW OPERATION FOR PROLAPSUS UTERI.—A Mexican medical journal gives an account of an operation practiced by Dr. Malanco for the purpose of forming a kind of false uterine ligament in cases of prolapsus. It consists in passing a trocar from the anterior vaginal fornix to the abdominal wall (taking care, of course, to avoid the bladder), and in applying the actual cautery to the track by means of a thermo-cautery inserted through the canula from the front. The proceeding, which was first proposed by Dr. Fenelon, of Mexico, is stated to have been employed several times with the most successful results.—*Lancet*, Nov. 20, 1886.

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PUBLISHED WEEKLY.

THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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A NEW TREATMENT OF FEVERS.

M. ALBERT ROBIN, who so admirably combines a thorough knowledge of physiological chemistry with medical learning, has just published, in the *Gazette Médicale de Paris*, of December 25, what he calls "A New Therapeutic Method; or the Oxydizing Method in the Treatment of Fevers, and particularly of Typhoid Fever." In this communication he directly combats the accepted ideas as to the antipyretic treatment of fevers, and he does this in accordance with new grounds which are "more in accord with our knowledge of the state of nutrition in pyrexia." From the chemistry of nutrition in typhoid fever M. Robin lays down the three following propositions: 1. The elevation of febrile temperature does not depend on an increase of organic oxydations. 2. During fever there is retention in the organism of but slightly soluble waste, eliminable with difficulty, and generally toxic. 3. Organic disintegration is very much increased during fever. He now wishes to establish the *first therapeutic principle* to which the chemical study of nutrition in fever leads, and to show that so far from seeking to impede oxydations therapeutics should tend, on the contrary, to make them as active as possible, since, contrary to the classic opinion, the oxydations undergo a remarkable diminution in typhoid fever. Now perfect oxydation gives rise to soluble products, easily eliminated, and almost deprived of toxicity; while other chemical reactions give rise to only slightly soluble waste matter, which is eliminated with difficulty, and usually have considerable toxicity.

M. Robin next proposes to prove that oxidation is diminished in typhoid fever. "It has been believed, though wrongly, for a long time that the production of heat is subordinated to organic oxydation. But it it is now known that oxydation is not the exclusive source of animal heat and of febrile pyrexia; and it is also known that disassimilation is accomplished by the successive acts of which the first are hydrations and chemical combinations, which give rise to products which are only secondarily overcome by oxydation, and that animal heat results from the *ensemble* of all these reactions. And in typhoid fever, as the acts of oxydation are decreased the part played by oxydation in febrile pyrexia should be proportionally reduced. Now, in reality, the coefficient of oxydation[1] is less in typhoid fever than in the phlegmasiæ, and even less than in the normal state, since it is not above 74 per 100, while physiologically it is 85 per 100. Again, the proportion of urea is in inverse ratio to the gravity of the disease; and, thirdly, the excretion of carbonic acid of the typhoid fever patient is to that of the healthy man as 83, 8:100. It is therefore vain to attempt to restrain oxydation so as to lower temperature, since this would be assisting the disease. The aim of therapeutics in these cases should be to regulate organic disintegration, and thus to favor oxydations instead of hydrations and chemical combinations, so that the products of tissue waste, having undergone more perfect evolution, may be easily eliminated and rendered as little noxious as possible."

There are, therefore, according to M. Robin, two great therapeutic indications: 1. To eliminate from the treatment of typhoid fever all measures and medicines which retard oxydation. We must from this point of view, revise all our antipyretics. 2. The second indication is to favor, in every way possible, the organic oxydations which will diminish the formation of extractives, of ptomaïnes and leucomaïnes, and which, at the same time, attacking those products already formed, will assist in their elimination by oxydation, or in other words, will make them more soluble and less toxic. In regard to the first indication: sulphate of quinine retards disintegration without diminishing oxydation, provided it be given in small or broken doses; in large doses it lessens oxydation and the absorption of oxygen at the same time. It should therefore be given in small and broken doses. Antipyrin diminishes nitrogenous disintegration, but it at the same time diminishes still more the oxydation of disintegrated nitrogenous matters. It increases the amount of uric acid, and

[1] In excessive assimilation the quantity of urea is increased, and decreased in defective disintegration, according to Robin. To ascertain if the urea is increased it must be compared with the total quantity of urinary solids; and to express this relation he invents the term *coefficient of oxydation*.

diminishes the amount of urea; that is to say, it increases the amount of less soluble and not easily eliminated waste matters, while it lessens the vehicle which should carry them off. It increases the excretion of potash; which is to say, it demineralizes (as regards potash) the red blood globules. Other antipyretics have been tested, and will be treated of in a later communication. How is the second indication to be effected? 1. By maintaining in the air to be respired by the patient oxygen in sufficient quantity. 2. By keeping the respiratory apparatus, which is the port of entry of oxygen, in as perfect a state as possible. 3. By stimulating the nervous system, which exercises a direct influence on oxydation (cold spongings and baths increase the coefficient of oxydation, and regulate the proportion between the phosphoric acid and the urinary nitrogen, probably by the assistance of the reflex stimulation which they exert on the nervous system). 4. By choosing among the different drugs, those which cause increase of oxydation. As to the chlorine salts, while they furnish some oxygen to the system, they must be given in large doses for this purpose; and as these large doses are toxic, these salts should be rejected. The iodine and bromine salts are more easily reduced than those of chlorine, but the question of their toxic action on the red globules is not yet solved. We must therefore turn our attention to drugs which favor the absorption of oxygen or set free oxygen. Among the agents which will fulfil this indication are alcohol in small doses, common salt, the alkalies, the salts of organic acids, and the free ingestion of liquids.

As has been already said, the second therapeutic principle, derived from the chemical condition of nutrition during typhoid fever, is to favor the elimination of retained waste matters. This has already been made a special study, one of the conclusions of which is that a number of the so-called antipyretics, among which may be mentioned the salicylates, do not diminish intra-organic oxydation, but act on the temperature, and assist in eliminating in a soluble form, the slightly soluble extractives of the system. We may then speak of this new method as "the removal by solution of incompletely oxydized organic residue." The third principal, the restraining of the disassimilation which is so exaggerated in fevers, will be further studied by M. Robin.

COUNTY MEDICAL SOCIETIES.

Two weeks since we stated that the *ideal* plan of a complete and most efficient organization of the medical profession in this country, required the organization of the profession of every county or limited district of each State and Territory, into a Society with a constitution and by-laws providing for regular meetings for mutual acquaintance and professional improvement, and also for the election of one delegate for every five of their members to unite with a similar ratio of delegates from the other Societies in the same State to constitute the State Society, which should have its constitution and by-laws requiring at at least one meeting annually, at which *one* delegate for every ten of its members should be elected to unite with a similar ratio of delegates from all the other State and Territorial Societies in constituting the National representative organization of the profession of the whole country. It requires but a moment of reflection to perceive that a State Society composed of delegates thus chosen annually by the professional organization of each county or district, could not fail to represent correctly the social, scientific, and legal interests of the profession of that State; and that a National Society composed of delegates similarly chosen annually by each of the State Societies would be equally the true representative of all the interests of the profession of the nation. It is equally apparent that such a complete National professional organization would offer the greatest possible facilities for collecting and concentrating the influence of the profession for any great or important object, whether relating to the educational and scientific advancement of the profession itself, or the promotion of the sanitary interests of the whole people; and equally efficient for radiating the spirit of investigation, mutual respect, and generous emulation developed by the annual contact of the most active and enlightened minds in the National meetings, back through the State organizations to the remotest county and parish in our great Republic. It is hardly necessary to remind our readers that a representative National organization, capable of efficient work in the various directions here indicated, has for its foundation the primary organizations in each county or district. On the degree to which these can be made to include every active and intelligent regular member of the profession, and the activity with which their regular meetings are sustained, will depend, in a very great degree, both the permanency and value of the State and National Associations. It is here, in the incompleteness of the primary local organization of the profession in many parts of our country, that we trace nearly all the important defects in the practical working of our present State and National Associations. While State Medical Societies exist

in all the States, in only a very few do societies exist in all the counties or small districts, and only in a small number of the counties or districts in which societies exist, do such organizations embrace all the regular practitioners within their respective limits. Hence the most important and urgently necessary work in rendering the medical organizations of our country more complete and more permanently valuable, consists in active and persevering efforts to induce the formation of a medical society in every county containing five or more regular members of the profession, in which they can meet each other annually, semi-annually or quarterly, as they may find convenient. Here they would form each other's acquaintance, mutually increase each other's knowledge by reporting and discussing their more important cases, and their views of the local causes of such endemic diseases as they met with, and by securing the attendance of one or more of their number at the annual meetings of the State Society, where they would imbibe and bring back whatever was developed of value, whether it be new facts, improved practical methods, or increased zeal for investigation. Equally earnest efforts should be made to induce *all* the educated and reputable members of the profession to join the county or local society where one already exists. Experience has abundantly shown that no practitioner in any department of the wide domain of medicine and surgery can spend the same amount of time in any other way so profitably as in habitually attending the meetings of his professional brethren, and personally participating in their work. It softens his prejudices, multiplies his friendships, stirs his spirit of honest emulation, quickens and disciplines his thoughts, broadens the field of his mental vision, and furnishes him with abundant opportunities for making himself generally known and respected, which he could gain nowhere else. A careful study of the history of medical societies and those who have sustained them, especially in this country and Great Britain during the last half century, will demonstrate the advantages to which we have alluded as plainly as the sunlight at noonday. Why, then, do so many, especially of the younger members of the profession, stand aloof in apparently selfish isolation, while others are content to enter into social relations only with a few who are cultivating a narrow specialty—a mere half acre of the broad domain of medicine? The answer we will try to give next week.

RESPONSIBILITY OF MEDICAL MEN IN REPORTING CONTAGIOUS DISEASES.

Many months since much interest was excited in medical circles by the prosecution of two highly esteemed physicians of New York for damages, by a lady who had been placed in the pest-house by the Health authorities on the strength of a certificate given by the physicians that she had an attack of small-pox, which she claimed was not true. It was not claimed that the physicians had intentionally or maliciously certified falsely, but simply that they had failed to make a correct diagnosis, in consequence of which she had been unjustly exposed to the atmosphere of a hospital for contagious diseases. Though the defendants showed that they had only given the certificate in obedience to the positive requirements of the law and in accordance with their best judgment; and that the Health authorities were the only parties responsible for the removal of the patient from her home, yet the trial resulted in a verdict of damages for a considerable amount. This decision of the court placed every physician in a dilemma. If, when called to a case of contagious disease in that early stage when, as is well known, the chief diagnostic symptoms are not sufficiently developed to admit of a positively correct diagnosis, the physician delays one or two days before he sends his report to the Health Department, and it proves to be a case of small-pox or scarlet fever, he renders himself liable to prosecution for not reporting it earlier; while on the other hand, if he yields a prompt obedience to the law which requires an immediate report, if he happens to err, the decision to which we have alluded makes him liable for full damages to the patient. This places every practising physician in a position so manifestly unjust, that the defendants appealed the above case to the Superior Court, which has recently reversed the decision of the lower court and set aside the judgment.

MULTIPLICATION OF MICRO-ORGANISMS.

In the *Proceedings of the Royal Society*, No. 245, 1886, Dr. Percy Frankland records some series of very interesting experiments on this subject, and shows that the pecularities of multiplication of micro-organisms have an intimate connection with the dissemination of infectious diseases. His experiments show that at the ordinary temperature of the air the micro-organisms show a decided tendency to become fewer after some time of storing; but the number of colonies is very greatly increased by exposure to an incubating temperature. In filtered river water the micro-organisms become multiplied at 20° C. with much greater rapidity than those in unfiltered water; and the organisms in deep well-water manifest but little tendency to multiply in the cold, but at 20° C.

their multiplication is in excess of anything observed with river waters.

With regard to these results Dr. Frankland says: "These tables show the enormous capacity for multiplication which is possessed by the micro-organisms present in this deep well-water. This is the more surprising, at first sight, when it is borne in mind that this water contains the merest trace of organic matter. It must, however, be remembered that this water is at the outset almost wholly free from micro-organisms, and that it has never before been inhabited by such living matters; it is only reasonable to infer, therefore, that those of its ingredients which are capable of nourishing the particular micro-organisms which flourish in it are wholly untouched, whilst in the case of the river waters the most available food-supply must have been largely explored by the generations of micro-organisms which have inhabited them."

We thus have an explanation of those cases in which infectious diseases are disseminated by well-water, examples of which, especially in the case of typhoid fever, are abundant. Dr. Frankland points out that the original source of the micro-organisms should be regarded before the value of such investigations are estimated.

CHARLES JAMES FOX, M.D., of Willimantic, Conn., has been appointed Surgeon-General of the State of Connecticut, and entered upon his duties as a member of Governor Loundsbury's staff on the 7th inst. It is a deserved compliment to one of the most active and intelligent members of the profession in his State.

SEPARATING THE INCURABLE INSANE FROM RECENT CASES.—The desirability of doing this has been clearly pointed out by professional writers, and we are glad to learn that the importance of the subject received attention by Gov. Thayer, of Nebraska, in his recent inaugural address.

THE SACRAMENTO MEDICAL TIMES is the title of a new monthly journal, the first number of which will appear in March, under the editorship of James H. Parkinson, L.R.C.S., and Wallace A. Briggs, M.D., of Sacramento, Cal.

RETIREMENT OF PROFESSOR PAJOT.—Prof. Pajot, of the Paris Faculté de Médicine, recently attained his seventieth birthday, the time at which all Professors in French institutions must retire.

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY.

Stated Meeting, December 20, 1886.

THE PRESIDENT, EDMUND J. DOERING, M.D., IN THE CHAIR.

DR. HOSMER A. JOHNSON read a paper on

PSEUDO-MEMBRANOUS BRONCHITIS.

(See p. 60.)

DR. N. S. DAVIS said: The disease which has been reported in the paper is one of rare occurrence. Having had occasion within the last two years to hunt up the literature on the subject, I found nothing more than has been stated in the paper, but I have no doubt that the disease is of more frequent occurrence than the reported cases would indicate. It is not always readily recognized, the question of diagnosis is not pursued with such closeness that the practitioner identifies it clearly, or gives it sufficient attention to recognize that it belongs to a rare form of bronchitis, and consequently the case is treated until the patient is well, or dead, and no record is made of it. In my own practice I think I have recognized at least four or five cases, and I remember some of them perfectly well, and the facts connected with them. I think the disease is more frequently met with in a chronic than in an acute form. The case that has just been detailed would come under the former class. In the majority of cases the disease attacks only a limited portion of the bronchial distribution. The cases that have been met with in an acute form, covering the greater part of the bronchial distribution, have been almost uniformly fatal.

The last case of this character that I treated was a young woman, a servant girl, who was attacked with general bronchitis. At first I supposed it was only a severe catarrhal bronchitis, but it created a cough unusually suffocating. There was but little expectoration for the first two days, subsequent to that she began to get, in the paroxysms of coughing, a little viscid, frothy mucus, and several times a day there came mingled with it well defined shreds of a membranous character. The patient belonged to a family that had marks of some specific influence of an hereditary character. In the progress of the case, during its acute stage, there were no complete casts, but shreds sometimes an inch and a half long, as though they were torn loose and thrown off. In the later stages the membranous discharges ceased and there was a suppurative condition. She expectorated a copious purulent matter as in ordinary cases of tuberculosis, but there were no cavities of the lungs, and the structure gave no evidence of having been invaded. She finally became exhausted and died. I have seen one other case that I regarded as an acute attack of this character; a child between 7 and 10 years old. That also ran an acute course, and the patient died from suffocation from the persistent obstruction. The other cases that I have seen have been of the chronic character and apparently involved

only a portion of the air passages. They would have attacks accompanied by feverishness and soreness which would go on to suffocating, violent paroxysms of cough, and in the midst of the cough would discharge more or less of the exudation. One case ended in the development of what has been called of late years fibroid phthisis. There was gradual contraction of one side of the chest, diminution of resonance, increased fremitus of voice, and purulent expectoration mingled with more or less mucus, and the patient died exhausted. The record of statistics shows that a large majority are of a partial character, involving but a limited portion of the bronchial surface, and these, though obstinate and apparently difficult to relieve, usually recover. I think that it is stated, also, that there is more than an ordinary tendency to involve ultimately the fibrous tissue of the lung and bring on that form of phthisis. If you examine the membrane under the microscope you will find in the fibrillated material some scant particles of fat granules and here and there a leucocyte, and when expectorated there is frequently an exudation of blood, but I think not often the amount reported in this case. I recollect very little, if any, blood following the expectoration of membrane in the cases I have had an opportunity of observing. Each layer of membrane tends to disintegrate, and when one has been thrown off another follows it, and this goes on, in the chronic form, indefinitely, unless there is a change of condition. In these cases, as in all true plastic exudations, there is some condition of the blood or of the vital properties that continues the existence and exudation of plastic material.

In regard to the treatment, I have nothing specially new to offer. I found that the chronic form was most benefited by ordinary anodyne expectorants combined with alteratives, especially of the mercurial class. In two instances of the chronic form the steady use of the alterative mercurial influence until there was a little swelling of the gum and a taint of the breath, then dropping it and using oxide of potassium with the more tonic class of expectorants, was followed with good results and ultimate recovery.

I remember one instance, I cannot say positively that it was of the true pseudo-membranous character, of a man whom I was called to see and who subsequently came to my office. He had an attack of the subacute character, involving apparently the whole of one bronchial distribution, which produced a very persistent and distressing cough with apparent suffocation. The man and his wife averred that in his coughing he threw off long pieces of a membranous substance several times, but as it was never saved I had no opportunity of examining it. In this case there was a well developed rheumatic diathesis, and I looked upon it as partaking somewhat of the nature of rheumatic bronchitis associated with plastic exudation. I put the man upon salicylate of sodium, dose 10 to 15 grains, accompanied at first by ordinary anodyne expectorants to help allay the severity of the cough. It acted favorably, and not only his bronchitis but his rheumatic troubles disappeared, and he made a fair recovery. The character of the cough and their description of the expectoration led me to look upon it as a case of pseudo-membranous bronchitis, and I questioned in my own mind when contemplating the subject, whether in the true plastic exudation that persistently forms, dislodges, re-forms and keeps on doing so, if the patients were put upon full doses of such remedies as salicylate of sodium or ammonium, sufficient to effect a decided change in the quality of the blood, it might not give better results than those ordinarily used.

Dr. Robert Babcock said. The paper is one of the most interesting I have listened to. It is needless for me to say, since such a man as Dr. Johnson has seen but one case, and such a man as Dr. Bowditch has never seen a case, that I have never seen one. In regard to the etiology, I would merely state that R. Douglass Powell says this form of bronchitis may be observed in all ages from childhood to old age. He differs from the author of the paper in saying that it is more frequent in females than in males. He mentions the probability that there is a hyperinotic condition of the blood. The line of treatment pursued by Dr. Johnson is interesting with regard to this point; after giving iodide of potassium and the mercurial salt in pretty full doses the character of the expectoration changed, becoming mucus and frothy, and it was not until these remedies had been given up and syrup of iron substituted that the plastic character of the bronchitis reasserted itself. May it not be that the exhibition of the potassium iodide and the mercurial salt did overcome to a certain extent the hyperinosis which may have existed in this man's case?

Dr. S. D. Jacobson: It has been my good fortune to see, besides this instance of the chronic form, which I saw through the courtesy of Dr. Johnson, one case which represented the acute form of this disease. It was a friend of mine, a man of about 47 years of age, who was accustomed to take great quantities of alcoholic stimulants. In the winter of 1871 he came to me and complained that for several days he had had some trouble with his pharynx, and he had expectorated a large amount of mucus. I inspected his pharynx and found a condition such as might be expected from a man who was out of doors a great deal, who was an inveterate smoker and a very convivial man. There were no symptoms of diphtheria; it was a case of pharyngitis or tonsillitis. Under the usual treatment it improved in a couple of days. About a week after he sent for me, and I found him with some fever and a very distressing cough. He expectorated great masses of mucus, and I recognized them as casts of bronchial tubes of the first and second order. At that time I had never heard of such a case. The next day I found him in great distress, and after a long and tiresome cough he brought up numerous quantities of matter like the first casts I had observed, which I found to be of the third and fourth order of bronchial casts, and after that he felt relieved, but died on the third day afterward. I then saw a report in the *Scandinavian Medical Archive*[1] describing a case exactly similar to mine, except that the man was 34 years of age. On

[1] Vol. iv, fasc. 4, 1872.

post-mortem it was found by incising the chest that it contained air over both lungs, and the bronchial tubes of the first, second and third order all contained casts. The lung contained air mixed with mucus and pus. The trachea contained casts which terminated on the under surface of the epiglottis. The physician questioned whether it was an ascending bronchitis or a descending fibrinous exudation from the pharynx downwards, because in this case, as in my own, there had been tonsillitis about a week before the alarming symptoms set in, but arrives at the conclusion that the disease was primary in the bronchial tubes. I have thus been fortunate enough to observe this rare disease in two cases, one representing the chronic, the other the acute form, and both of them conforming to the rule laid down by Dr. Davis, that the acute generally terminates fatally, while the chronic in many cases terminates favorably. Both of my cases were of the male sex, and both were rather given to alcoholic stimulants.

DR. E. FLETCHER INGALS said: I have had very little experience in these cases. It has never been my bad fortune to meet with a case of acute diphtheritic bronchitis except those growing out of ordinary diphtheria, which are unfortunately frequent. I have treated three cases of the chronic form of the disease, none of them very severe. In each case there was from time to time expectoration of the croupous deposit, but I did not see them at any time when they were very ill. The history of the chronic cases is that that they will have acute attacks from time to time for months or years, running from ten days to two weeks. They almost universally recover from these, though occasionally they die of phthisis. The acute cases, as a rule, die, though from 25 to 50 per cent. are said to recover. A friend in the country sent me last winter casts from a large number of the bronchial tubes. I should say there must have been five or six branches to these casts. They had been coughed up by a patient of his who subsequently recovered.

DR. C. M. FITCH said: Some eight years ago I had a case of this kind in a lady about to be confined. When I first saw her she was in an almost comatose condition, the face livid, and she was almost pulseless, the respiration fearfully obstructed, although air was entering all the larger bronchi. The woman died a few hours later, the child being born after she had become entirely unconscious. Four or five days later a child of the same family was taken with diphtheritic croup, the membrane passing down through the larynx, when Dr. Fenger performed the operation of tracheotomy. I have no doubt that lady's case was one of acute croupous bronchitis.

DR. H. A. JOHNSON, in closing the discussion, said: In reply to Dr. Babcock as to the influence of the potassium and mercurial salts upon the exudate, not only was the expectoration frothy, but after using these medicines for some time the casts became thin and evidently diminished in amount before they were thrown off. It was my opinion that the mercurial salts and the potassium had some influence in diminishing the amount of the exudate. You will remember, some time in December until February there were no casts thrown off. Some time before that the patient had been taking potassium and mercurial salts. In estimating the frequency of this disease I have excluded cases which seemed to be of diphtheritic origin. I have seen several cases where there have been well marked casts thrown off; in one case there were seven successive discharges from the bronchi ramifications of one lung. Those were diphtheritic and were from a child who was recovering from bronchial diphtheria. I do not say that this is not in its character anything like diphtheria, but I think there is a radical difference in the membrane and that which forms in diphtheria. It does not seem to me that we have the same tendency to disintegration that we have in diphtheritic forms of exudation, the exudate is more plastic. I have purposly not discussed the acute form as I have not had an opportunity to study such cases. The notes were made in the presence of the patient and they seemed to me worthy to be put on record.

DR. H. A. JOHNSON read a paper on

PNEUMATIC DIFFERENTIATION AND MEDICATION.

The question of pneumatic differentiation has been quite largly discussed by members of the medical profession during the last two or three years, but there seems still to be a good deal of mystification on the subject. I was unable to be present when the matter was brought before this society. I therefore beg permission to say a few words which I had intended to say at that time and also to exhibit a contrivance for medication by spray or vapor in condensed air. It is not my purpose to discuss the merits of pneumatic differentiation. The subject, if not the term, has been before the profession for many years, and various devices have been employed in its accomplishment. The manufacturers of pneumatic cabinets insist that the desired results can be realized only by placing a patient in a box with a tube, by means of which he breathes the air of the room, while the pressure on the surface of the body is either diminished or increased by pumping air out of the box or into it. It is claimed that the result upon the body must be quite different from that reached by the use of the Waldenburg apparatus or other similar devices, for the reason that in some way the movement of a body under the pressure of a force, we will say, of fourteen pounds against a resistance of thirteen pounds, in which the available moving force is one pound, must be quite a different process from that which is reached when the moving force is fifteen pounds and the resisting force fourteen pounds. They do not, it is true, state it in this form, but they do assert that, in case we will say of the patient breathing through a tube the external air while the air in the chamber has been partly exhausted, so that its pressure is one pound per square inch less than the outside air, a *vis a fronte* is developed, by which the fluids and gases of the body are moved in a manner quite different from that which takes place when the patient sitting in the room breathes from a tank air compressed so that the pressure of the air breathed is one pound per square inch greater than that of the air in contact with the

surface of the body. It must be evident that there is a fallacy in this claim.

We no longer use the phrase, *vis a fronte*, in the sense of an active force when we apply it to such phenomena as those which occur in the case of a vacuum filled by in-rushing matter. It is well-known now that there is an active force from behind, a *vis a tergo*, which pushes into a partial vacuum sufficient matter to equalize the force, whatever it be, on the other side, or to produce an equilibrium of force. In the pneumatic cabinets there is therefore only another mechanical device for affecting the differentiation produced by the Waldenburg apparatus, and which has repeatedly been produced by breathing air from a tank into which it has been condensed by some means, such as air pumps, water pressure, etc. I am not alone in holding this opinion. Dr. Isaac Hull Platt in a paper read before the American Climatological Association at its third annual meeting, is led to conclude that the effects of breathing condensed air from the cabinet, the patient sitting in the room, are the same as those produced when the patient, placed in the cabinet and the air pressure reduced about the body, is allowed to breathe the air from the room. He says: "To put the matter beyond a doubt," that is the claim of a special value in the inclosure of the patient in the cabinet, "I have reversed the breathing tube of the cabinet, placing the patient on the outside and compressed the air within the cabinet. The effects produced upon the residual air and upon the pulse, as well as the subjective experience of the person operated upon, were found to be identical with those obtained when he was within the cabinet and the pressure reduced to the same degree."

I have made quite a number of experiments bearing upon the same question with results in no sense differing from those reached by Dr. Platt. The proposition to conduct medicated sprays into the alveoli of the lungs by the differentiation of air pressure has been also ably treated by Dr. Platt, but I do not desire to consider it in this connection. I presume all admit that to the upper air passages sprays may be applied with, in many cases, benefit. The use of sprays or vapors with condensed air is conveniently accomplished by the use of the cabinet, but this result can be and has been repeatedly reached, and just as easily, by other devices.

I have within the last twenty years resorted to several different contrivances for that purpose; an ordinary atomizing tube may be inserted through an opening in the tube from the tank, so that medicinal substances are thrown in the form of spray into the stream of condensed air inhaled. There are quite a number of ways of accomplishing this: That which I have more recently used and which I submit to the society as a sample of what may be done, consists of a glass tube (I employ an ordinary percolator such as pharmacists use) to one end of which a breathing tube is attached and to the other end through a cork the atomizing tube and also the tube from my tank of condensed air. I at one time used a double tank, or rather two tanks, with an air gauge and stop corks, so that I could maintain any required pressure in the tank from which my patient breathes. This tank may be a simple boiler such as is used in kitchens for heating water for circulation through the house, say eighty gallons or more, or it may be in any other form desired. As the pressure is never great, not more usually than one-half or at most three-fourths of a pound to the square inch, it may be made of wood. A strong, tight cask or barrel even will answer the purpose. The ordinary form of pneumatic cabinet—the New York cabinet or the Pine cabinet—may be used as a tank, but it is unnecessarily heavy and clumsy and expensive. As I have a Pine cabinet in my office, I use it as a tank, with an 8 inch air pump for compressing the air. A copper or sheet-iron tank that can be obtained of any plumber at a small fraction of the expense of the cabinet is quite as useful. Any physician who has a spray tube and glass vessel with two openings, a wolf bottle or even an ordinary wide-mouthed bottle, can provide himself with an apparatus just as useful as the pneumatic cabinet. By the use of a thin way stop-cock expiration may be made into a tank of compressed or rarefied air, or against a valve supported by a spring of any desired pressure, or through a narrowed opening, so as to regain force to expel the air from the chest. All these methods have been used to accomplish the same result, as expiration from the cabinet into outside air. The simpler the thing, provided it works, the better. The less mystery thrown around the whole subject, the better. I am quite confident that the physiological and therapeutical results obtained by the pneumatic cabinet are only such as may be reached equally well by the Waldenburg apparatus or by the still more simple means used some years since by the late Dr. Frank H. Davis, of this city. The apparatus is within the reach of anyone having a tank for condensed air for the purposing of atomizing or vaporizing medicinal substances, and requires no more skill or knowledge in its use than is required to administer narcotics, antipyretics or anæsthetics.

Dr. E. Fletcher Ingals asked Dr. Johnson if he thought the patient would get more of the medicated vapor into the lungs with the compressed air than with ordinary air.

Dr. Robert Babcock said: It has always been my opinion that pneumatic differentiation is essentially the same as the administration of compressed air, and I have not found reason to change this opinion. However, in justice to the inventor, I would like to ask Dr. Johnson what he thinks of Mr. Ketchum's assertion that the rarefication of the air around the chest of the patient by lessening atmospheric pressure allows the chest, and therefore the residual air, to expand, and with this expansion of the residual air lessens the resistance to the tidal air. In other words, that if the residual air did not expand the tidal air would meet with resistance from the residual air as from an air cushion; also, that this expansion of the residual air tends to force out any little plugs of mucus which may have obstructed the bronchials; that in this respect pneumatic differentiation certainly accomplishes more than could be done by the inhalation of compressed air.

DR. H. A. JOHNSON said: The claim of a special *value* in the cabinet as a means of differentiation is based upon a fallacy, viz., the assumption of the *vis a fronte*. If you take the pressure off from the outside of the chest there is a kind of force that drives the fluids to the surface of the body. Suppose you reverse the case, place the patient outside and let him breathe the rarefied air, is there a *vis a fronte?* It certainly seems to me that there is no such thing. It is a *vis a tergo* that pushes air into the lungs, and a *vis a tergo* that pushes the air out of the lungs, and the equilibrium is maintained. As to the effect of the rarefied air in the cabinet upon the residual air, it is about the same as going up and down in an elevator of one of our tall buildings. In answer to Dr. Ingals, it would seem to me that more spray may be carried into the bronchial tubes in the stream of condensed air than in air inhaled without differentiation of pressure. The discussion is simply upon the physiology and physics, not the value of pneumatic differentiation. Mr. Ketchum or some one connected with him, invented that term, but the thing itself, taking the name away, is by no means new.

DR. FRANKLIN H. MARTIN read a paper on

ELECTROLYSIS IN THE TREATMENT OF FIBROID TUMORS OF THE UTERUS,

with a description of Dr. Apostoli's methods.

He considered his subject under the following heads:

1. Consideration of the tumor.
2. Means of generating a current.
3. Electrodes, connections and other apparatus.
4. Electrolytic action of the current.
5. Cataphonic action of the continuous current.
6. The difference in the local action of the two poles with powerful currents.
7. Operation and details of application, with a description of Dr. Apostoli's methods.

He divided fibroid tumors of the uterus according to their position, into submucus, interstitial, and subperitoneal; according to their condition into hæmorrhagic and non-hæmorrhagic. Any means of generating a continuous uninterrupted current of electricity of 200 milliampère strength that is practicable will answer all the requirements for electrolytic treatment of fibroid tumors of the uterus. Dr. Martin uses a battery composed of 115 crow-foot gravity cells for this purpose, from which he can easily get a current of three or four hundred milliampères strength when properly charged. Storage cells and the dynamo were mentioned as possessing a future for this kind of work.

The very strong current that one now used in operations of this kind is made practicable by improvements in electrodes and conduction. Dr. Apostoli overcame the pain caused by high tension currents by using as a surface electrode a thick paste of potter's clay spread upon the abdomen with proper connections from a plate of soft metal upon its free surface. This answers the purpose perfectly, but has the objection of being very troublesome and very inelegant. Dr. Martin presented a decided innovation in this direction in the way of a surface electrode. From a soft plate of metal, the margins of which are bent so as to form a concavity upon one surface of an inch in depth, he has constructed an electrode by stretching loosely over this concavity an animal membrane, making the surface between the membrane and the metal water-tight. Through a stopper in the metal surface the inter-surface is filled with a warm saturated solution of chloride of sodium. This contrivance, with its membranous surface upon the abdomen, with proper connections from the metal surface, possesses all the advantages of the potter's clay electrode of Dr. Apostoli, with none of its disagreeable features. The author has been able to use a current of 150 milliampères strength by means of the above electrode without producing the slightest discomfort. The internal electrodes include a uterine sound of platinum with the intra-vaginal portion insulated, a sharp probe of platinum and irridium with insulating sheath and a number of needles insulated with hard rubber to within an inch of the point.

The electrolytic action of the current was dwelt upon at length and given its due prominence.

The cataphonic action of the galvanic current was described, and to its action the author ascribed considerable prominence as aiding absorption of the fibroid growths.

Galvano-caustique is the name given to the local effect of the two poles when used intra-uterine in the form of metal probes. This effect is considered a great point of importance by Dr. Apostoli, and from which he expects to see a great advance developed in the treatment of the hæmorrhagic fibroid tumors of the uterus. The effect referred to is only obtained from a current of 100 milliampère strength concentrated by means of an electrode of unattachable metal. The local effect of the two poles upon the lining of the uterus are distinctly different. The effect of the positive pole is to coagulate and harden the tumor that it comes in contact with without changing the vitality of the tissue. The effect of the negative pole is to cause a liquefaction of the tissues in which it comes in contact, with considerable destruction of tissue.

The coagulating effect of the positive pole is utilized in transforming the hæmorrhagic surface of the endometrium into a dry, coagulated surface that will not allow of a hæmorrhagic exudate.

Three operations or methods of application of these powerful doses were described in detail.

1. Intra-uterine *galvano-caustic*.
2. Negative cervical galvano puncture.
3. Galvano puncture or needle operation: (a) extra-peritoneal; (b) intra-peritoneal.

The first operation (intra-uterine galvano-caustic) is employed for two effects: 1st, to check excessive hæmorrhage by the local effect of the positive pole upon the endometrium of the uterus; 2d, for the reduction in size of the tumor by the electrolytic action of the powerful current as it passes through the tissue of the tumor.

The second operation (negative cervical galvano puncture) is performed for the purpose of establishing an artificial channel into the substance of the

growth, to take the place of the cervical canal that has been distorted or obstructed to such an extent that it cannot be entered for the ordinary intra-uterine treatment. The effect sought here is the reduction of the tumor.

The third operation described by the author of the paper was the galvano puncture, or needle operation proper. This is for the treatment of large sub-peritoneal fibroids that can only be reached by means of needles, and the electrolytic action only of the current is expected.

The author offered the following summary of conclusions:

1. A means of generating a continuous current of electricity which can be increased from 10 to 250 milliampère strength is necessary in order to obtain all the effects of the electrolytic treatment of fibroid tumors of the uterus.

2. The most distressing hæmorrhages from fibroid tumors can be healed by the local coagulating effect of the positive pole if applied intra uterine.

3. The intra-uterine electrode when positive should be of unattachable metal and should conform as nearly as possible to the size and shape of the uterine canal, and have the intra-vaginal portion insulated.

4. When the cervical canal cannot be entered a negative-galvano puncture should be made into the presenting part of the obstructing mass of the tumor, and an artificial channel created which is to take the place of the impenetrable uterine canal in all subsequent treatments.

5. The intra-uterine electrode should in all cases be negative, unless there is hæmorrhagia or excessive leucorrhœa, when the positive pole is required.

6. The strength of the current should be the strongest possible consistent with the desired therapeutic effect, and the toleration of the patient.

7. Cases of intolerance of high doses arrange themselves under the three following heads: 1, acute hysteria; 2, acute enteritis; 3, acute metritis, peri- or pari-metritis. The most tolerant are the deep uteri and profusely hæmorrhagic.

8. The ordinary duration of the séance should be about eight minutes.

9. The number of operations are necessarily dependent upon and influenced by the result to be accomplished. A severe hæmorrhagia can be checked in from four to five treatments, while a general reduction of the tumor necessitates many, varied, of course, according to the size and location of tumor. In many cases simply a restoration to health and a relief from the prominent and annoying symptoms must be accepted as the substitute for an actual cure.

10. The time of commencing treatment matters little if the tumor is not rapidly growing and no excessive hæmorrhage is present. The operation should be intra-menstrual, if possible, but if hæmorrhage is continuous, operate during flow.

11. Extra-uterine puncture should be regarded only as a last resort, but every means of reaching the tumor through the uterus being impracticable, seek, if possible, to make the operation extra-peritoneal; should this, in turn, prove equally undesirable, use as a final alternative the abdominal puncture.

12. Strict antiseptic precautions should be carried out in this treatment, as in all others.

Dr. H. T. Byford said: I wish to express my admiration of the mastery which Dr. Martin has acquired over this method of treatment. It will undoubtedly take an important place among the surgical remedies for uterine fibroids. But the usefulness of any remedy must be determined not only by its effect, but also by its safety and convenience of employment. For instance, the radical treatment, or removal of the tumor, is a frightfully severe measure, and is reserved for cases that cannot be cured in any other way, while removal of the appendages is attended with considerable risk of life, and is reserved for those cases which cannot be helped by less dangerous means. So also this electrolysis, which is difficult of application and capable of harm, must be reserved for cases which cannot be cured by remedies more convenient and less hazardous. But before this, the safest of surgical procedures, can become the usual treatment for such cases, it must prove more efficacious than the still safer medicinal treatment. Fibroid tumors with hæmorrhage are the ones also most benefited by ergot and tampons in the majority of cases, and after the hæmorrhage is thus relieved there is no hurry in resorting to surgery. As to the effect of this treatment on the tumor itself, the evidence is not all in. The success of Apostoli, whose persistence is very praiseworthy, has been somewhat limited with regard to the removal of the tumor. The success of the so-called electrolysis upon fibroids seems to be no better, if as good as that of ergot, and I doubt if it is produced in a very much different way. That electrolysis can break up the chemical constituents of a living tumor for any considerable distance from the electrode, without destroying the life and absorbing properties of the tissue in the course of the current, is a theorem that requires more than mere mathematical demonstration. We all believe, however, that it can stimulate the uterus to a contraction and partial strangulation of the tumor, and also stimulate the absorbents to remove it, and are prepared to have it proven to us that it will do so in many cases in which ergot fails. But it happens that the cases in which ergot is of the least use are those in which electrolysis is of most difficult application—the subperitoneal. And yet I have, as a rule, relieved the symptoms of the subperitoneal variety (excepting those immense neglected ones too large for anything but removal) by ergot, which, even when it cannot cause compression of the tumor, can diminish its blood supply. I hope and believe, however, that the methods of Apostoli will enable us to manage safely cases that must otherwise require a dangerous operation.

Dr. William T. Belfield said: Dr. Martin has conferred a favor upon us in bringing Apostoli's method before us. During the last twenty-five years various attempts have been made to reduce fibroids of the uterus by the galvanic current; yet none of them have been recognized as successful, because, doubtless, as Dr. Martin very properly says, the current has been used in an ignorant, inaccurate and bungling way. Apostoli's method is unique in the

strength of the current used, as well as in the accuracy of its application to the uterus; whether this method will produce satisfactory results remains, as I think, to be seen, for Apostoli himself has been guilty of the gross inaccuracy which necessarily impairs the confidence claimed by his statements. Through Dr. Martin's kindness I had an opportunity to read Apostoli's book in which are set forth his methods and the results of treatment on ninety-eight patients. The book bears the impress of perfect candor and truth, and yet, in looking through the ninety-eight cases which he records as fibroids of the uterus, most of which were benefited, it is evident that nearly all were not fibroids, but were cases of subinvolution. Many of them were women under 30 years of age belonging to the poorer classes, and who were unable to secure proper rest and care after confinement. The clinical history as well as the physical examination recorded by Apostoli shows that they were plain cases of subinvolution. That the electric current has a value in such cases is unquestionable and has often been demonstrated, but it is not accurate nor justifiable to apply the results obtained in treating subinvolution to the treatment of fibroids, for the distinction between subinvolution and myoma is as sharp anatomically and etiologically as it is clinically. It seemed to me that only four of Apostoli's cases were evidently and certainly uterine fibroids; it is possible that six others might be so reckoned, but certainly eighty-eight of the cases were, so far as can be judged from the record, cases of mere subinvolution. Yet the results secured in these four cases were most positive and decisive. In two of them the tumors were of enormous size. These two patients had been seen by Pean, whose opinion was sought as to the advisability of operation. In one case he declined to operate on the ground that the patient could not survive an operation; in the other he was ready to operate, but the patient declined. Yet both of these cases of undoubted and extensive myomata were rapidly and greatly improved and the tumors reduced under Apostoli's treatment. But four cases are not enough to justify a generalization, and I hope that Dr. Martin will soon favor the Society with the results of the method in his own hands, for we may be sure that he will avoid the sole error which can be charged against Apostoli.

DR. P. S. HAYES said: I have not given this matter a trial in fibroid tumors, but I have in the use of electricity generally. There are two factors in the treatment of fibroids by electrolysis—the chemical and physical and the physiological. How the physiological action of electricity operates is a question, but the chemical and physical produce their effect by the splitting up of compound molecules and the chemical and physical liberation of gases at the poles. Certainly this factor (the chemical and physical) can be measured by the amount of chemical work dones which depends upon the strength of the battery, etc. It seems to me that a current even of 50 milliampère, is rather strong to use in the beginning. I have had quite an extended experience, and I can now call to mind six or eight cases in which even the slightest galvanic current would produce dizziness so that the patient would have to lie down for half an hour. I remember one case in which I used only half a dozen cells; the patient left my office staggering like a drunken woman, and finally had to go in some place and rest. Afterwards I was unable to treat her except by allowing the current to traverse a very minute portion of her body. An induction apparatus the helix of which consists of thick wires and in which the current is generated by a battery of very large surface, gives a current which resembles somewhat the interrupted galvanic current; it stands midway between the ordinary induced current and the interrupted galvanic current of eight or ten cells. This current, applied over a tumor sufficiently strong to produce vigorous contractions, will reduce the size of a fibroid when ergot has failed to do so, and apparently in the same way, by inducing forcible uterine contractions and contractions of the abdominal muscles, tending to astringe it and squeeze out the life-blood which enters into it. It seems to me, from my experience, that the injection of a few minims of 95 per cent. carbolic acid into the tumor would produce a very similar local result to that produced by either the positive or negative pole. In the *Medical Record* that I received to-day I saw an abstract of the last paper of Apostoli in which it states that, while he has reduced fibroid tumors in size, relieved the distressing symptoms and made the patient very much better, yet he does not claim that he has ever absolutely removed a fibroid so that it could not be detected. I think that this method of treatment offers a good deal of hope in many cases where other means have failed, and I should not hesitate to try it myself and recommend others to do so.

DR. FRANKLIN H. MARTIN, in closing the discussion, said: I cannot agree with Dr. Byford that this method of treating fibroid tumors should be reserved as a last resort. In careful hands it is entirely free from danger, pain, and (except in the last variety of operation described this evening) all disagreeable features, and it should not, therefore, be postponed until less efficient and more objectionable means have been employed, such as the hypodermic injection of ergot, its administration internally in large quantities, tamponing the vagina, cauterization of the uterine mucous membrane, and innumerable other less efficient means of relief. In my experience with the strong current I have never yet seen an untoward result, and I have employed currents varying in strength from 25 to 250 milliampères. Apostoli's method should especially be adopted early for the checking of hæmorrhage from the uterine cavity. I cannot agree entirely with Dr. Belfield's conclusion in regard to Dr. Apostoli's results as reported in 1884.[1] My

[1] That Dr. Belfield is in error in regard to this point will be made very apparent by the following summary of the cases reported by Dr. Apostoli and referred to by Dr. Belfield: 94 cases were reported; 15 of the cases had never borne children. Of the remaining 79 cases, where subinvolution of the uterus was possible, we find 4 pedunculated subperitoneal tumors in which error of diagnosis was not probable. Of the remaining 75 cases, 9 measured from 10 to 21 cm., and the accompanying descriptions of the cases can leave no doubt in an unprejudiced mind in regard to their being large fibroid growths. The full description in detail of the remaining 66 will convince any one who will take pains to peruse them that at least 44 are well-defied fibroids. This leaves but 22 cases of the 94 reported in which there are not distinctive characteristics described, which definitely distinguishes them from simple subinvolution of the uterus.

own results have been such as to make me very sanguine in regard to the value of strong currents for the relief of these difficulties, but as the object of the paper is the discussion of the method, and not the results, I must postpone the consideration of the latter until another time. I have never seen troublesome dizziness occur in the use of these currents in treatment about the abdomen.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday, December 2, 1886.

THE VICE-PRESIDENT, E. E. MONTGOMERY, M.D., IN THE CHAIR.

W. H. H. GITHENS, M.D., SECRETARY.

FIBROID TUMOR OF THE RIGHT LIGAMENT.

DR. W. CONSTANTINE GOODELL exhibited for Dr. W. Goodell the right broad ligament containing an enlarged ovary, and close by its side, but distinct from it, a fibroid tumor of the shape and size of the non-gravid womb. The left ovary was also greatly enlarged. It contained a cyst which burst into the cavity of the abdomen while the woman was being examined four days before the operation, which took place in Dr. Goodell's private hospital on June 22, and she recovered promptly. Her symptoms were painful and feeble locomotion, constant ovarian pains, menorrhagia followed by prolonged dribblings of blood, and a retroversion which could not be rectified on account of the tender and dislocated ovaries. She had been under treatment for several years, and without benefit; but since the operation she had greatly improved.

He also exhibited for Dr. W. Goodell an

INTRA-LIGAMENTOUS OVARIAN CYST,

with the following history: The girl, aged 18, had been growing large for two years, and her health also began to fail, but a tumor was not suspected until six months ago, when she was examined by Dr. Geo. H. Woods, of Pine Grove Mills, Pa. Discovering a cyst, he sent her to Dr. W. Goodell. The operation was performed on September 25, at his private hospital, and was a difficult one, because most of the cyst lay between the folds of the right broad ligament, and the rest of it was adherent at every point to intestines and abdominal wall. It was enucleated so completely that no pedicle was left to tie. He exhibited it mainly to show the greatly hypertrophied and dilated oviduct, the walls of which are very thick and were filled with pus. The left ovary being of the size of a goose's egg, was also removed. It contained pus, and also was enveloped in the broad ligament and had to be shelled out. In spite of the complications, this case recovered promptly. Dr. W. Goodell had had during the past year another case of intra-ligamentous cyst of the most formidable character. The cyst was attached to nearly the whole of the colon, to the small intestines, to the bladder, and to the whole surface of the womb, measuring five inches in length. The lower portion lay between two layers of the broad ligament, from which it was shelled out without a pedicle. The parts were so disorganized that the second ovary could not be found, nor was it possible to determine positively which ovary had been removed. But the presumption is that it was the right, because nearly the whole of the right ureter, fully ten inches of it, had to be carefully dissected off from the cyst wall and from between the layers of the broad ligament. Many ligatures were used, and very little blood was lost, but the patient died on the table from shock, while the wound was being closed. Before this death, Dr. W. Goodell had had twenty-two successive ovariotomies, all of which recovered, and he has had eight successful cases since, making in all thirty-one cases with but a single death.

DR. JOHN M. TAYLOR, upon invitation from the chair, remarked that the first case reported by Dr. Goodell had been originally under his care. He had attended her in labor and nothing abnormal occured in the puerperal period. He had examined her six weeks later, as is his custom, and found nothing wrong. Some months afterwards she had a miscarriage; there was some placental retention, and it was followed by ovarian tenderness and signs of inflammation which gradually increased, the ovaries became enlarged. Nine months after the miscarriage the operation was performed. An interesting question is, When did the tumor begin?

DR. MONTGOMERY remarked that there was a resemblance between the tumor and one horn of a uterus bicornus. Was there a distinct separation between the uterus and the tumor, or could it have been such a horn?

DR. W. C. GOODELL stated that the tumor was separated from the uterus by an inch. The tumor has greatly diminished in size since it was placed in alcohol.

DR. HOWARD A. KELLY exhibited a

PAROVARIAN CYST

weighing thirty-seven pounds. The patient, a young woman, multiparous, had noticed the tumor one year before. The character of the percussion wave and the evenness of the belly wall decided a correct diagnosis. A point of interest was the flatness of the anterior abdominal wall with more fulness in the flanks than the speaker had ever before observed in a cystic tumor. The tumor was removed through a two and a half inch incision. The fluid was viscid and yellowish. There were no adhesions. The broad pedicle was transfixed and tied, and over this a tie made embracing the whole. The wound was closed by silk-worm gut sutures, five to the inch, and the whole operation completed in thirty-six minutes.

It is two weeks to-day since the operation. The patient is sitting up in a rocking chair. She had no fever at all a pulse daily growing slower, and felt well. The cyst was one large cavity containing several cauliflower vegetations on its inner wall. The ovary lay intact on its outer wall and the tube about ten inches in length was drawn out over it.

REMOVAL OF OVARIES AND TUBES FOR SUBINVOLUTION AND CHRONIC METRITIS.

DR. KELLY considers the indications in this case so well-defined and new that he designs making it the subject of a more detailed critical communication. The patient, about 35 years of age, had raised five children, but for several years had suffered from constant soreness of the whole hypogastrium, a spot of intense burning pain to the left of the uterus, and a constant dark leucorrhœa. The menstrual congestions greatly increased her symptoms, which were again aggravated by several early abortions. She had been under excellent treatment before coming to Dr. Kelly, and had been carefully treated by him, but with only moderate, temporary improvement. Dr. Kelly then decided to stop the menstrual function, with a view to checking the periodical determination of blood to the uterus and finally bringing about complete involution of the organ. The operation was performed on the same day as that before described. The ovaries and tubes were removed through an incision two inches long. The ovaries were full of pea-sized follicles and were covered with a dense capsule, and were probably (not, however, in consequence of these appearances) diseased. The speaker insisted that the operation here had no reference whatever to any disease which might be found in the appendages, but the sole indication lay in the state of the uterus; the ovaries, whether diseased or not, were removed to correct that trouble. The recovery was as perfect and free from disturbance as any slight injury, and the patient was up in the next room on the fourteenth day, when the uterus was free from tenderness and already rapidly undergoing involution.

DR. CHAS. MEIGS WILSON considered oöphorectomy a resort of doubtful propriety as a remedy for metritis; for, as the menopause occurring physiologically would not stop such an inflammation, we would scarcely expect it to be of greater benefit when the result of an operation. He doubts the moral right of exposing the patient to the risks of abdominal section for such a condition.

DR. KELLY remarked that one reason for the operation for the relief of metritis was the exacerbation of all the symptoms at the menstrual period. Maternity could not again be accomplished in consequence of abortion; complete rest in bed had failed to stop them. He thinks these ovaries are diseased; ovaralgia has undoubtedly some anatomical basis, but he is not able to say how it is to be discovered; more microscopical research is needed. The history of this case excluded syphilis.

(To be concluded.)

DOMESTIC CORRESPONDENCE

RUMEX ACETOSA FOR REMOVAL OF MORBID GROWTHS.

TO THE EDITOR OF THE JOURNAL:

Dear Sir:—In an adjoining county there resides a so-called cancer doctress, who, like all of her class, professes to remove and cure cancers without the use of the knife. She uses a plaster which in from three to six applications will, so she claims, "kill any morbid growth and after a few hours poulticing remove it in one piece." That she does succeed in extirpating tumors there can be no doubt, but the means used by the members of the fraternity has, so far as I know, remained a secret which no reasonable amount of money would induce them to impart to the medical profession or laity. Their patients are numerous, owing to the fact that most people, seem to have an innate dread of the surgeon's knife, no matter how skilfully used; although it is far less painful than this local application. Four of my patients during the last few years have had growths removed in this manner, and when they were not of a malignant nature, have resulted successfully. Two of the most intelligent I requested to keep a sharp look-out and try to discover what it was that was used. One of them, with a sarcoma, (not benefited) felt certain that it was the juice of sheep-sorril, and procured the green plant, and after bruising it made the application to the sore twice a day, and had the satisfaction after the third day to notice the characteristic white appearance, which was the indication that its work was done, then with the poultice removed quite as much of the mass as did the quack doctress. The other one, having gone to her home to be treated, reported sheep-sorril as his discovery, having, unknown to her, found her gathering the plant in large quantities from which she extracted the juice, placing it in the sun until it had evaporated to the consistence of syrup when it was mixed with some excipient, and was ready for use.

Shortly after the reception of this information, a gentleman called to consult me about an ulcer on his nose. It had made its appearance about two years before in the form of a pimple, which in due time opened, but would never heal; a scab would form and in a few days come off, leaving an ugly looking ulcer, to be quickly covered and shed in the same manner; there was an uneasy sensation about it all the time, with, as he expressed it, "an occasional gnawing." He had tried every thing he could hear of and consulted a number of physicians without obtaining relief; it was slowly enlarging and this caused him much anxiety. I found the sore about one-sixteenth of an inch in diameter, the surrounding skin slightly indurated, the surface of the cup-shaped sore very red, smooth, and filled with serum; he had been advised to consult this cancer doctress, but was undecided what to do. I told him that I was convinced that all she used was common sheep-sorril, and that if he would procure some, press out the juice saturate a piece of cotton and apply twice a day, keeping that put on in the morning in constant contact until renewed at night, until the skin around looked white and shrunken, then poultice, and he would have done all she could do and save 25 or 50 dollars. He "caught on" at once, made the application, and was gratified by the removal of a small hard lump, and the only evidence of its former presence, twelve months after, is a small depressed scar. Whether this result is due to the oxalic acid which is present in this plant I leave for others to determine;

but that the juice will cause the *painful* removal of morbid growths, and is the agent used by some, if not all cancer-quacks, I am fully convinced.

Eltinge, reports a case of epithelioma of the lip cured by the application of the inspissated juice of oxalis acetocella, (*Phil. Med. Times*, xii, 159). King, I believe, says, that it is reputed to possess the power to remove tumors and cancerous growths.

Yours truly,

AMOS SAWYER, M.D.

Hillsboro, Ill, Dec. 29, 1886.

REDUCTION OF INVERTED UTERUS.

TO THE EDITOR OF THE JOURNAL:

Dear Sir:—The reading of Dr. W. W. Jaggard's interesting case of the reduction of a chronic inversion of the uterus by colpeurysis, in the last number of THE JOURNAL (Jan. 1, 1887), revived an old thought of mine, which I have had no opportunity of putting to a practical test, viz., that doubtless more certainty and promptitude as well as safety, in the reduction of inverted uteri, might be attained by the direct application to the protruding fundus and body of mere purely medicinal and dynamical, or physiological agencies, than by mere pressure or mechanical means alone, though they may be usefully combined. Thus, by the immediate application to the inverted fundus and corpus uteri of astringents and stimulants the *vis incita* and tonicity of the uterine tissues might be sufficiently increased to cause contraction, retraction, and reduction of the inverted organ more speedily and easily than by colpeurysis or mechanical measures exclusively. The most promising agents to be thus applied to the everted part are acetate of lead, common potassic alum or iron-alum, tannin, ergot, nux vomica, strychnia, hot-water douches especially, and electricity by current from fundus to sacrum or abdomen. As most of these agents are directly or indirectly active hæmostatics as well as astringents and stimulants, they are specially indicated in cases of hæmorrhages and other defluxions from the uterus. Even if not always sufficient of themselves for the reduction of the inversion, these agents could not fail to be more or less useful in connection with pressure by colpeurysis or otherwise. The same principles and remedies are efficient in relaxation, inversion, prolapsus, and paralysis of the bowels and other parts, and should be likewise effective in this similar abnormity of the uterus. Believing these agents will act effectively, in the speedy and easy reduction of inverted uteri in all degrees and stages, both acute and chronic, I present them suggestively for consideration and trial.

Respectfully,

GEO. J. ZIEGLER, M.D.

Philadelphia, 1887.

ASSOCIATION ITEMS.

THIRTY-EIGHTH ANNUAL MEETING AMERICAN MEDICAL ASSOCIATION.—*Section of Obstetrics and Diseases of Women.*—The following papers are announced for the June meeting in Chicago:

J. E. Kelly, New York, "Lithiasis in Pregnancy."

Charles Meigs Wilson, Philadelphia, "The Technique of Ovariotomy."

Hiram Corson, Plymouth Meeting, Pa., "The Treatment of Abortion."

Wm. T. Taylor, Philadelphia, "Eclampsia."

W. S. Caldwell, Freeport, Ill., "Intra-Uterine Therapeutics."

Geo. F. French, Minneapolis, Minn., "The Chief Source of Danger from the use of the Uterine Sound."

B. E. Hadra, Austin, Texas, "Hysteria and the Ovaries."

The following gentlemen have signified their intention of contributing papers, but have not yet announced the topics:

W. M. McPheeters, St. Louis, Mo.
A. McLaren, St. Paul, Minn.
John M. Keating, Philadelphia, Pa.
W. H. Wathen, Louisville, Ky.
W. H. H. Githens, Philadelphia, Pa.
Howard A. Kelly, Philadelphia, Pa.
W. P. Manton, Detroit, Mich.
A. H. Halberstadt, Pottsville, Pa.

F. M. JOHNSON, M.D., Ch'n.,
Kansas City, Mo.

W. W. JAGGARD, M.D., Sec'y,
2330 Indiana Ave., Chicago.

AMERICAN MEDICAL ASSOCIATION.

FORMED IN 1846.

Next annual meeting will be held June 7th, 8th, 9th, and 10th, 1887, in Chicago, Ill. President, E. H. Gregory, M.D., St. Louis, Mo. Permanent Secretary, W. B. Atkinson, M.D., Philadelphia, Penn. Assistant Secretary, J. Nevins Hyde, M.D., Chicago, Ill. Treasurer, Richard J. Dunglison, M.D., Philadelphia, Penn. Librarian, C. H. A. Kleinschmidt, M.D., Washington, D. C. Chairman of Committee of Arrangements, Charles Gilman Smith, M.D., Chicago, Ill.

All membership dues should be sent direct to the Treasurer, RICHARD J. DUNGLISON, M.D., lock box 1274, Philadelphia, Penn.

MISCELLANEOUS.

THE PARIS ACADEMY PRIZES.—The Vernois prize has been awarded to M. Monod for a collection of works relating to Hygiene.

The Amussat prize of 1500 fr. has been given to Dr. Assaky for a work on "The Restoration of Sensibility by Suture of Nerves."

The accrued interest of the Morbinne Fund has been awarded to Dr. Charrin for a Report on the Epidemic of Cholera in the Department of Finistère.

The Desportes prize was not awarded, but M. Du

Castel received a recompense of 1000 fr. for a work on the treatment of Variola, and D. Moncorvo, of Rio de Janeiro, one of 500 fr. for his work on the treatment of Whooping Cough with Resorcin.

The Civrieux prize for a work on Migraine was divided between Dr. L. Thomas, of Paris, and Dr. Régeard, of Paris.

The Huguier prize was awarded to Dr. Charles Perrier for his ingenious treatment of inversion of the uterus.

The Godard prize was divided between Miss Klumpke, "Les Paralysies radiculaires du Plexus brachial," and Dr. Leon Perrin, whose paper was on "Cutaneous Sarcomatosis."

The "Prix de l'Hygiene de l'Enfance," "Relations of Syphilis and Rachitis in Early Infancy," was awarded to MM. Cazin and Iscovesco.

The Academy prize, of 1000 fr., on "Ruptures of the Urethra and their Treatment," was awarded Dr. A. J. Etienne, of Toulouse, with honorable mention of the paper of Dr. Drochon.

The Henri Buignet prize, 1500 fr., was awarded M. Lafon, of Paris, for his "Studies on Digitaline."

The Capuron prize, on the subject "The Relative Value of the Different Methods of Determining the Age of Intra-uterine Life at the Time of Birth; Its Medico-legal Applications," was awarded Dr. Bouillet, of Béziers.

The Fabret prize on the "Relations between General Paralysis and Cerebral Syphilis," is continued for 1887.

The Herpin prize, "Is there an Abortive Treatment of Confirmed Syphilis?" was awarded M. Marcel Crivelli, of Paris.

Louis prize, "Study of the Action of Mercury, Nitrate of Potash, and of Digitaline;" not awarded, but a recompense of 500 fr. given MM. Chautard and P. de Gennes, of Paris.

The Orfila prize, on "Serpent Venom," is continued for 1888.

The Portal prize, on "Exophthalmic Goitre," was awarded Dr. Liégeois, of Bainville-aux-Saules.

The Saint-Paul prize for a specific against Diphtheria; an encouragement of 1,000 fr. to Dr. Alfred Sass, of Paris.

SCHOOL HYGIENE IN AUSTRALIA.—In Australia, says the *Sanitary News*, the subject of school hygiene has received proper attention in the State schools for some years. The teachers are particularly instructed to be careful about the spread of infectious diseases, and the public health law is stringent enough to secure the exclusion of scholars and teachers from houses in which communicable diseases exist. In the State schools of Victoria, since 1879, a system of object lessons has been given with a view of imparting elementary instruction bearing upon the health of the people. These lessons generally include such subjects as food, clothing, ventilation, cleanliness, and the prevention of infectious diseases. There have also been given at stated times lessons for the treatment of snake-bite, for the resuscitation of the drowned, and for the first aid to the injured. The department of education requires some elementary knowledge on the part of teachers upon the subjects of sanitation and physiology, wisely substituting in this connection, the term sanitation for that older and less comprehensive word, hygiene.

IMPURE ICE.—The New York State Board of Health, in a report on the dangers of contaminated ice, draws the following conclusions: Ice formed in impure water has caused sickness; it may contain from 8 to 10 per cent. of the organic matter dissolved in the water, and in addition a very large amount of the organic matter that had been merely suspended or floating in it; it may contain living animals and plants ranging in size from visible worms down to the minutest spores, and the vitality of these organisms may be unaffected by freezing.

CHOLERA IN EUROPE.—The recurrence of cholera in fresh localities in Eastern and Central Europe, says the *Lancet*, is the most striking feature of the present phase of this year's epidemic. Large outbreaks are hardly to be expected in Europe at this season of the year, but it is most disquieting to learn that in certain parts of Austrian and Turkish Croatia, and in some districts of Hungary, fresh places are being attacked. The disease has also taken a fresh stride in a south-eastern direction, Belgrade having been attacked. According to the latest intelligence, cholera broke out in one of the infantry barracks, and between the 21st and 27th of November there had been fifty cases and ten deaths. The King of Servia, on receiving the intelligence, returned to his capital and personally visited the sick; he at the same time stimulated the authorities to take ample precautions to prevent the spread of the disease. Typhus is also prevalent in Belgrade, so that there is doubtless ample room for sanitary progress.

THE LUMLEIAN LECTURES will be delivered on March 24, 29, and 31, by Dr. Priestley, on the "Pathology of Intra-uterine Death."

THE GULSTONIAN LECTURES for 1887 will be delivered on March 3, 8, and 10, by Dr. Macalister, of Cambridge, on "The Nature of Fever."

SANITARY INSPECTION OF PASSENGER CARS.—DR. R. HARVEY REED, now engaged in making an inspection of passenger cars on railways running in and through Ohio, has forwarded a copy of the blank used. Boards of Health engaged in such inspection would do well to obtain a copy.

KOCH'S RESEARCHES ON CHOLERA have been confirmed and extended by Drs. Tizzoni and Cattani, of Bologna, who have taken advantage of the recent epidemic of cholera in the north of Italy to study the subject.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JANUARY 1, 1887, TO JANUARY 7, 1887.

First Lieut. H. I. Raymond, Asst. Surgeon, ordered for duty at Presidio of San Francisco, Cal. S. O. 127, Dept. Cal., Dec. 29, 1886.